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**Proceedings at Boston, May 11th, 1887.**

THE Society met on Wednesday morning at 10 o'clock, in the hall of the American Academy. The President, Professor Whitney, being absent, on account of illness, the Vice-President, Rev. Dr. Peabody, of Cambridge, took the chair.

The Recording Secretary, Professor Lyon, of Cambridge, read the minutes of the foregoing meeting and they were approved. The general order of proceedings was announced, and after this the reports of the retiring officers were presented.

The accounts of the Treasurer, Mr. Van Name, were referred, with the book and vouchers, to the Rev. Messrs. Dickerman and W. H. Ward as a Committee of Audit, and upon examination were reported to be correct. They may be summarized as follows:

RECEIPTS.

Balance on hand, May 12th, 1886,	-	-	-	-	-	-	\$953.14
Assessments (100) paid in for year 1886-87,	-	-	-	-	-	\$500.00	
Assessments (26) for other years,	-	-	-	-	-	130.00	
Two life-memberships,	-	-	-	-	-	150.00	
Sale of the Journal,	-	-	-	-	-	36.48	
Interest of bank-deposit,	-	-	-	-	-	35.41	
Total receipts for the year,	-	-	-	-	-	-	851.89
							\$1,805.03

EXPENDITURES.

Printing of Proceedings,	-	-	-	-	-	\$240.41	
Job-printing,	-	-	-	-	-	21.75	
Expenses of correspondence (postage, etc.),	-	-	-	-	-	22.50	
Total expenditures for the year,	-	-	-	-	-	-	\$284.66
Balance on hand, May 11th, 1887,	-	-	-	-	-	-	1,520.37
							\$1,805.03

The Bradley type-fund now amounts to \$1,083.86.

The Librarian, Mr. Van Name, reported as follows: The accessions to the Society's collections during the year 1886-87 consist of thirty-six volumes, seventy-six parts of volumes, and one hundred and one pamphlets. Aside from the regular exchanges, the most important contribution has come from the government of India, ten volumes, some of them of unusual value. The number of the titles of printed books is now four thousand three hundred and sixty-nine, and of manuscripts, one hundred and sixty-two.

For some time past, the crowded state of the Library of Yale College has left but scanty accommodations for the Library of the Society, and made the proper arrangement of the books impossible. From this difficulty there is now prospect of a speedy relief.

The Corresponding Secretary, Professor Lanman, of Cambridge, announced for the Committee of Publication that the printing of Professor Bloomfield's edition of the *Kāuṣikasūtra* was so far advanced as to render the early issue of the first half of the thirteenth volume probable; and that ample material was on hand with which to begin the fourteenth; leaving the second part of volume xiii. for the rest of Professor Bloomfield's work, if this should appear desirable.

On behalf of the Board of Directors it was announced that the next meeting would be held on Wednesday, October 26, 1887, either at New Haven or at Baltimore, the President and Treasurer to serve as a Committee of Arrangements. The Committee of Publication had been re-appointed, so that it consists of Messrs. Salisbury, Toy, Van Name, W. H. Ward, and W. D. Whitney. The Directors proposed and recommended to the Society for election the following persons:

As Corresponding Member—

Prof. J. H. Haynes, Central Turkey College, Aintab;

and as Corporate Members—

Prof. John Binney, Berkeley Divinity School, Middletown, Conn.;

Prof. Hermann Collitz, Bryn Mawr College, Penn.;

Prof. H. V. Hilprecht, University of Penn., Philadelphia;

Rabbi Emil G. Hirsch, Sinai Congregation, Chicago, Ill.;

Mr. James R. Jewett, Harvard College, Cambridge, Mass.;

Mr. Charles Knapp, Columbia College, New York City;

Prof. J. G. Lansing, Theological Seminary of the Reformed Church,  
New Brunswick, N. J.;

Prof. George F. Moore, Andover, Mass.

The gentlemen thus proposed were duly elected.

The Chairman named as a committee to nominate officers for the ensuing year the Rev. Mr. Dickerman and Professors T. O. Paine and Elwell. The Committee reported later on, proposing the re-election of the old board, with the substitution of the name of Professor Edward W. Hopkins for that of Professor Short, recently deceased. The proposal of the Committee was ratified by the meeting without dissent.\*

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\* The names of the board as now constituted may be given for convenience: *President*, Professor W. D. Whitney, of New Haven;—*Vice-Presidents*, Rev. A. P. Peabody, of Cambridge; Professor E. E. Salisbury, of New Haven; Rev. W. H. Ward, of New York;—*Recording Secretary*, Professor D. G. Lyon, of Cambridge;—*Corresponding Secretary*, Professor C. R. Lanman, of Cambridge;—*Secretary of the Classical Section*, Professor W. W. Goodwin, of Cambridge;—*Treasurer and*

The Corresponding Secretary read the names of those who had died during the year. They were as follows:

The Honorary Members,

Prof. Adolf Friedrich Stenzler, of Breslau;

Mr. Alexander Wylie, of London;

and the Corporate Members,

Prof. E. W. Gurney, of Cambridge, Mass.;

Mr. Henry C. Kingsley, of New Haven, Conn.;

Prof. Charles Short, of New York.

Stenzler, the Nestor of European Indologists, was born July 9, 1807. His greatest achievements were upon the fields of the drama, of law, and of lexicography. He is perhaps most commonly known by his widely circulated *Elementarbuch der Sanskrit-sprache*. To his vast knowledge of Indian antiquity was joined a character remarkable for modesty, amiability, and stern devotion to duty. Like our lamented Dr. Williams, Mr. Wylie\* was a self-taught man, and devoted to a similar life-work, the spread of the Christian Scriptures in the Celestial Empire, where he was agent for the British and Foreign Bible Society. He wrote in Chinese important works, original or translated, on Arithmetic, Geometry, the Calculus, Astronomy, Mechanics, the Steam Engine, and on Manchu Tartar Grammar; a Dialogue on Christianity, and the Gospels of St. Matthew and St. Mark in Manchu and Chinese. In English, he published articles on Chinese religion, literature, and science, on the history of Protestant missions in China, translations from the "Ethnography of the Han," and "Notes on Chinese Literature," the last a most valuable contribution to Chinese Bibliography, reviewing over two thousand treatises. The great fruitfulness of Professor Gurney's† life was in fields of action that brought him little into the notice of the bustling world. As Professor of History, as Dean, and as Fellow of the Corporation of Harvard College, he has done a work whose influence upon individual minds and characters and upon the general development of higher education in this country has been and will long continue to be beneficent and powerful. Mr. Kingsley, of the class of 1834 in Yale College, had been for twenty-four years the Treasurer of that institution,

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*Librarian*, Mr. Addison Van Name, of New Haven;—*Directors*, Professor John Avery, of Brunswick, Maine; Professor Joseph Henry Thayer, of Cambridge, Mass.; Mr. Alexander I. Cotheal and Professor Isaac H. Hall, of New York; Professor Edward W. Hopkins, of Bryn Mawr, Penn.; and President Daniel C. Gilman and Professor Maurice Bloomfield, of Baltimore.

\* A memoir of his life and labors by M. Henri Cordier will appear in the July number of the *Journal of the Royal Asiatic Society*.

† A brief sketch of his life and services was presented to the American Academy of Arts and Sciences by Professor Dunbar, May 11, 1887, and may be found in the *Proceedings* of that body for that date.

and brought to the responsible duties of that office an untiring self-sacrifice and distinguished sagacity. Mr. Short graduated at Harvard in 1846, and had been for many years Professor of Latin in Columbia College, New York. Aside from his work as a teacher, the latter years of his life were devoted to the critical study of the New Testament, and he served as a member of the American Committee on the revision of the translation thereof.

The Corresponding Secretary laid before the Society some of the miscellaneous correspondence of the half-year. Shankar Pandurang Pandit, of Bombay, sends the Society a MS. of Dārila's Comment on the Kāuṣika Sūtra for the use of Professor Bloomfield. Darab Dastur Peshotan Sanjāna writes from the same city expressing his interest in the work of the Society and his cordial recognition of the contributions, now making and in prospect, towards the elucidation of the ancient monuments of his religion. Mr. James Richard Jewett, who has been teaching in Arabic in a little native school at Zahleh, Mt. Lebanon, writes that he has a large collection of proverbs and other texts in the common Arabic dialect of Syria, with translation, notes, and vocabulary—all well advanced towards readiness for publication.

After the miscellaneous business, the Society proceeded, at 11.15 A. M., to the hearing of communications, which were continued until 5 P. M., with a recess between 1 and 2 P. M.

1. The rising sun on Babylonian seals; by Rev. Dr. W. Hayes Ward, of New York City.

The family of seals discussed embraces those on which George Smith, in his "*Chaldean Genesis*," saw the building of a "tower." Of these there are nine which have been copied in various publications, besides a tenth in my own possession. Of all these, copies were shown. Menant and others have seen that it is not a tower that is represented, but a gate, or door, which the porter is opening or shutting. The projections on the top and bottom on one side, on which the door turns in its sockets, are clearly seen in some cases. The fact that the door is often narrower in the middle simply indicates that the seal is not a pure cylinder, but is smaller in the middle. These cylinders have one or more gates, with bands across them, like the bands on the gates of Balawat, and the porter has his two hands on the gate. On the other side of the gate from the porter, and so outside of it, is a very striking figure of a god. He has the horned headdress of a god, or has wavy rays proceeding from his shoulders. On one side of him, or on both sides, is a prominence half his height, on the top of which he lifts one foot; or he puts one hand on the top of each of the two as if lifting himself by that means. In his hand he holds a notched weapon. I am surprised that what is the simple explanation has not immediately occurred to me and to others. The gates are, I think, the gates of the dawn. The two gates are for symmetry, as is the fact so often in the case of other devices on the older seals, as of Gisdubar fighting a lion. I prefer this explanation to any which might make one gate that of the morning and the other of the evening. The gate of the dawn is being opened by the

porter for the exit of the sun-god, who appears as a mighty man, ready to run a race, and climbing over the hills of the east. That this is a true explanation is confirmed by several hymns to the sun-god, which were read from the translations of Mr. Pinches and M. Lenormant, in which the sun is apostrophized as entering at night into the gates of night and coming out of the gates in the morning. If this explanation is correct it also explains another much more abundant class of Babylonian seals, generally in hematite. On these a god stands with one foot slightly elevated, resting on a low prominence or stool, which sometimes takes the shape of an animal. In his hand he carries the same notched weapon, but he has no rays from his shoulders. I regard this as the same sun-god Shamash, in a more conventional form. These cylinders may date from 1500 B. C. to 700 B. C., while those with gates are older—having the archaic larger size and concave outline. The notched weapon I imagine to be a wooden sword or club, armed with flakes of flint, like the Mexican Maquahuitl. Associated with the sun-god on these hematite cylinders is almost always a flounced beardless figure with horned headdress and hands raised in an attitude of respect, which I take to be a deity and not a worshiper, and probably the goddess Aa, wife of Shamash. On these cylinders very frequently the only inscription is "Shamash and Aa," which, I take it, is one of the few cases in which the inscription identifies the deities represented. Besides these two figures often occurs a third divine figure (or, at least, wearing a horned headdress) leading in a man without a distinguishing headdress. Probably we have here a soul presented to Shamash who is called in the hymns "Judge of men." The hills up which the god climbs in the cylinders with gates would seem to indicate that the design had its origin in a hilly country like Elam. The hills of Elam were not visible from the cities of Southern Babylonia, but it is to be considered whether these hills can possibly be those which formed the chief feature of Chaldean scenery, the high-mounded banks of the great canals.

2. On the Syriac text of the book of The Extremity of the Romans; by Prof. Isaac H. Hall, of the Metropolitan Museum of Art, New York City.

This paper discussed one of the manuscripts recently acquired by the Union Theological Seminary, New York City, through the Rev. James E. Rogers, a missionary at Oroomiah. The manuscript is a small book, 6 x 4½ x 1½ inches in dimension, probably written in the last century. The writing is Nestorian, and somewhat careless. The contents are (1) The Revelation of the Apostle Paul, substantially the same with that in a manuscript belonging to the American Oriental Society, of which a translation by the Rev. Justin Perkins was published in volume viii. of the Journal; (2) "The Extremity of the Romans," a composition appearing to have been in part suggested by the Revelation of Paul, and narrating the matters about a letter that fell down from heaven in the year A. D. 779, in the days of the patriarch Athanasius; (3) a Hymn of "Praise before the Holy Mysteries." The last two compositions were given in the original text and translation, with a few notes and a little

preface, and will appear in the Journal. The Revelation of Paul, it was remarked, ought to be published in the original text, after the manuscripts are collated.

3. On the transliteration of Sanskrit proper names into Tamil; by Rev. John S. Chandler, of the Madura Mission.

The Tamil is a Dravidian language with its own independent structure and laws; but with a phonetic system widely differing from that of its Aryan neighbors. In religion, mythology, and legendary history, on the other hand, the Tamils are dependent, and have borrowed largely from the Aryans; so that the names of their gods and heroes, which are also the most common names of the people, are to a large extent Sanskrit names, which have suffered such transformations as the incommensurability of the two phonetic systems involved.

We have therefore to note the Sanskrit sounds which do not occur in Tamil, and for which in Tamil substitutes have to be provided.

Tamil has no lingual nor dental vowels; no sibilants; no aspirates; no sonants as distinguished from surds; no palatal mutes except the nasal; no *visarga*; and no *anusvāra*. Concurrent consonants must be assimilated or have a vowel inserted between them. No sonant can begin, and no mute of any kind can end a Tamil word. Nor can a surd stand in the middle of a word without being doubled. But as "surds" and "sonants" are convertible, and as the same Tamil character stands for both, these changes are easily made.

1. *Lingual vowels*.—Sanskrit *r* becomes in Tamil the syllable *ru*. Thus the prior element *rc* or *rk* in the name of the first Veda shows the following changes: *r* becomes *ru*. As initial, the sonant *r* requires a prothetic vowel, here *i*. Since a final mute is inadmissible, an *u* is post-fixed. The guttural mute is now medial and must be doubled to retain its surd quality. Hence the result, *Irukku*.

2. *Sibilants*.—The lingual, *ṣ*, is generally changed to the cognate mute, *ṭ*; while the dental, *s*, is changed to the palatal sibilant, or is dropped.

Thus *Viṣṇu* changes the sibilant to the mute, and, to avoid the concurrence of mute and nasal, inserts *u*, which, reacting on the mute, causes it to be doubled. Result, *Viṭṭunu*. The Tamil forms of *Kṛṣṇa* and *Tvaṣṭā* show changes essentially similar; they are *Kiruṭṭinan* and *Tuvaṭṭā*, the epenthetic vowel of the first syllable (palatal *i*, labial *u*), according in each case with the following consonant. In *Yudhiṣṭhira* we note a double loss of aspiration, and the entire loss of the initial sonant. Result, *Udiṭṭiran*.

The change of the dental *s* to the palatal *ç* is common: e. g., *Sāman* becomes *Çamam*; *Viçvedeva*, *Viçuvadevar*; *Sarasvatī*, *Çaraçuvadi*; *Sudarçana*, *Çudariçanam*. Alternative treatment is possible with an initial group: thus *Skanda* becomes either *Çikkandan*; or simply *Kandan*.

3. *Aspirates*.—Aspirates are generally dropped. Aspirated mutes lose their aspiration and become surd or sonant according as they are initial or medial. Thus *Bhīma* becomes *Pīman* or *Vīman*; *Dharma*,

*Taruman; Arundhatī, Arundadi; Bhārata, Paradan; Vidarbha, Vi-darppan; Bhagavan, Pagavan, etc.*

All Tamil sonants are weaker than those of the Sanskrit; but the guttural sonant is notably so, and is more like an aspirate made with the guttural organs. It is thus a fitting substitute for the Sanskrit aspirate, when the latter is not dropped. Thus for *Ahalyā* we find *Agaliyei*; for *Naravāhana*, *Naravāganam*; for *Rāhu*, *Iragu*; but for *Brāhmaṇa*, *Pir-āmaṇam*.

4. *Palatals*.—The non-nasal palatal mutes of Sanskrit, *c*, *ch*, *j*, *jh*, are represented by the palatal sibilant *ç*; or else by the same doubled and so changed to a palatal surd mute. Thus *Caṇḍāla* becomes *Çaṇḍalan*; *Candra*, *Çandiran*; *Piçāca*, *Piçaçam*; *Yajur*, *Eçur*; *Jātavedas*, *Çāda-vedā*.

5. *Visarga and anusvāra*.—As the *visarga* generally belongs to the ending, and the Tamil follows its own rules as to finals, this sound hardly appears. The *anusvāra* is represented by *m*.

6. *Concurrent consonants*.—Of concurrent consonants (aside from doubled surds, and from the nasals under certain conditions), we find either (a) that one is dropped, as at the beginning of a word; or (b) that the two are assimilated; or (c) that they are separated by a vowel.

Thus (a) *Kṣatriya*, with loss of the first of the initial group, becomes *Çattiriyan*. (b) *Yakṣa* becomes *Iyakkan*. (c) *Arjuna* becomes *Aruccunan*. Other examples are: *Droṇa*, *Turoṇar*; *Agni*, *Akkini*; *Atri*, *Attiri*; *Arya*, *Ariyan*; *Indra*, *Indiran*, etc.

7. *Surds and Sonants*.—Tamil consonants, being naturally surd, retain that quality at the beginning of words, and as medial when doubled. When medial and single, they must be sonant. In the name *Buddha*, therefore, after deaspiration, the consonants lose their sonant character, and the Tamil form is *Puttan*. On the other hand, *Nakula* becomes *Nagulan*. *Gāutama* shows two reversals, becoming *Kaudaman*.

It should be added, finally, that the Tamil sometimes uses certain Grantham characters, and is thus enabled to write some foreign names in their correct Sanskrit form.

4. On Naville's Book of the Dead; by Rev. W. C. Winslow, of Boston, Mass.

Egyptology rejoices over the recent issue of the "Book of the Dead," which the Congress of Orientalists, held in London in 1874, commissioned M. Naville to prepare. It is a monument of arduous labor and the most critical hieroglyphical scholarship. All orientalist sympathize with Egyptologists in their special rejoicing; and it is fitting that of our learned bodies in America this Society in particular should take note, even if but very briefly, of M. Naville's labors and their results.

The labor involved an exhaustive study of the papyri in the British Museum (26 in number), of Paris (17), of Leyden (5), of Berlin (5), and of Dublin, Hanover, Marseilles, Rome, Florence, Naples, Turin, and other places in Europe, as well as of the Boulak papyri and the inscriptions at Thebes.



The results are—21 entirely new chapters collected and collated,—Lepsius having, in 1842, published from a faulty text 165 chapters, which Birch, in 1857, translated in his Bunsen's "Egypt's Place in Universal History," but which, made from a corrupt text, is, in parts, far from intelligible to the un-Egyptological reader. The published results are : one folio of 212 leaves, containing 186 chapters with their variant vignettes, which number perhaps 800 in all ; one folio of 448 leaves, in which the thousands of variant readings, as collected by Naville, are tabulated in 182 chapters ; one quarto of 204 pages, introductory, explicative, and commentatorial on each of the 186 chapters. These volumes are beautiful specimens of hieroglyphic art and text. The advanced student has now before him for use a clear, full, reliable collection of these sacred writings of Ancient Egypt. It now remains to make a careful translation of these 186 chapters, for both student and popular reader.

5. On the relationship of the Kachari and Garo Languages of Assam; by Prof. John Avery, of Brunswick, Maine.

Within the circle of the Tibeto-Burman group of languages, there are certain closely-affiliated tongues which have been called the Kachari or Boḍo sub-group. The limits of this subordinate division have not been exactly defined; but its two principal members are the Kachari and Garo. Of less consequence are the Mech, Dhimal, Pani-Koch, Rabha, Hajong, and Lalung; to which should probably be added the Deori-Chutia and Hill-Tipperā, and possibly the Mikir.

The design of the paper, of which the following is a brief outline, was to show—mainly from the side of grammatical structure—the grounds on which Kachari and Garo are believed to be sister languages.

Kachari varies much, according to the district in which it is spoken; but may be divided into two principal dialects, one heard on the plains (P.K.) and the other in the hilly district of North Kachar (H.K.). The latter, as being less exposed to Assamese influence, shows, in many respects, closer accord with the Garo than does the former.

The chief points of comparison between Kachari and Garo are as follows :

I. *Sounds*.—The two alphabets agree in most points, among which is the absence of aspirated sonants, except as these have been rarely introduced with Aryan words; but P.K. also lacks the palatals *c*, *ch*, and *j*, for which, under Assamese influence, it substitutes *s*, *z*, or *zh*. For the same reason P.K. has the semivowel *w*. Neither of these peculiarities is exhibited in H.K. or G.

II. *Nouns*.—Gender, in both K. and G., is indicated, with rare exceptions, of animate objects only: and this is effected, (1) by special words, as Eng. "son," "daughter"; (2) by determinative words, as Eng. "man-servant," "maid-servant"; (3) by grammatical suffixes adopted from the Sanskritic languages. This last is found in the speech of the plains: e. g. *omā būndā*, 'boar'; *omā būndī*, 'sow'. The gender-determinatives vary to some extent with the class of objects denoted, and this differentiation is more complete in K. than in G. The words themselves are not the same in the two languages. Number is expressed

only as singular and plural. The ordinary suffixes of the latter are : *rāng*, *māng*, in Garo; *fūr*, *far*, or *frā*, in P. Kachari; *rāo*, *nishi*, in H. Kachari. Case-relations are expressed by suffixes ; which are, to a great degree, substantially the same in the three idioms, as will be seen from the following example :

GARO.	P. KACHARI.	H. KACHARI.
Sing.	Sing.	Sing.
Nom. <i>mānde</i>	<i>mansui</i>	<i>shubung</i>
Acc. <i>māndekho</i>	<i>mansuikho</i>	<i>shubungkho</i>
Inst. <i>māndeci</i>	<i>mansuizang</i>	<i>shubungjang</i>
Dat. <i>māndenā</i>	<i>mansujñū</i>	<i>shubungne</i>
Abl. <i>māndeoni</i> , or <i>-onikho</i>	<i>mansuinifrai</i>	<i>shubungniifrang</i>
Gen. <i>māndeni</i>	<i>mansuini</i> , or <i>-ha</i>	<i>shubungni</i>
Loc. <i>māndeo</i> , or <i>-onā</i> , <i>-ci</i> , <i>-cinā</i>	<i>mansuiau</i> , or <i>-niau</i>	<i>shubunghā</i>
Plu.	Plu.	Plu.
Nom. <i>mānderāng</i>	<i>mansuifūr</i>	<i>shubungrāo</i>
Acc. <i>mānderāngkho</i>	<i>mansuifūrkhō</i>	<i>shubungrāokho</i>
etc., etc.	etc., etc.	etc., etc.

A nominative suffix *ā* is sometimes used, in both languages, for emphasis.

III. *Adjectives*.—Comparison is made in precisely the same manner in K. and G., except that the particles used are different. Adjectives are declined or not, according as they follow or precede their nouns.

IV. *Numerals*.—Up to “ten,” these present little difference, P.K. apparently showing the greatest corruption of forms, as will appear from the following :

GARO.	H. KACHARI.	P. KACHARI.
1. <i>shā</i>	<i>she(si)</i>	<i>se</i>
2. <i>gni</i>	<i>gini</i>	<i>ne</i>
3. <i>githām</i>	<i>gātham</i>	<i>tham</i>
4. <i>bri</i>	<i>biri</i>	<i>bre(brui)</i>
5. <i>bangā</i>	<i>bungā</i>	<i>bā</i>
6. <i>dak</i>	<i>da</i>	<i>rā(da)</i>
7. <i>sni</i>	<i>sinī</i>	<i>sni</i>
8. <i>cet</i>	<i>jai</i>	<i>zat</i>
9. <i>skhu</i>	<i>shugū</i>	<i>skho</i>
10. <i>ci(-khung)</i>	<i>ji</i>	<i>zu(zi)</i>

V. *Pronouns*.—As was to be expected, we find here much agreement in the three forms of speech, thus :

	GARO.	PERSONAL.	P. KACHARI.
1st Sing.	<i>āngā</i>	H. KACHARI. <i>āng</i>	<i>āng</i>
Plu.	{ <i>ācingā</i> (inclu.) <i>cingā</i> (exclu.)	<i>jang</i>	<i>zang</i>
2d Sing.	<i>nāā</i>	<i>nu(nung)</i>	<i>nang</i>
Plu.	<i>nāshimāng</i>	<i>nushi (-nishi)</i>	<i>nangsur</i>
3d Sing.	<i>uyā</i>	<i>bwa</i>	<i>bī</i>
Plu.	<i>uyāmāng</i>	<i>bwanishi</i>	<i>bisur</i>

## DEMONSTRATIVE.

'this'	<i>iyā</i>	<i>eb</i>	<i>be</i>
'that'	<i>uyā</i>	<i>bwa</i>	<i>boi</i> or <i>bi</i>

## INTERROGATIVE.

'who'	<i>shā</i> or <i>shāoā</i>	<i>shōr</i>	<i>sur(sar)</i>
'which'	<i>māy</i>	?	<i>mā</i>

A relative pronoun, rarely used, is borrowed from Aryan speech; and appears as *je* in G., and *zi* or *zai* in K.

VI. *Verbs*.—This part of speech is simple and regular in structure in both languages. The suffixes of inflection, which agree in part only in K. and G., are attached directly to the simple or compounded root, with the occasional insertion, in K., of a euphonic vowel. The following are some of the most common suffixes. It will be noted that distinctions of person are confined to the imperative mode.

	GARO.	H. KACHARI.	P. KACHARI.
Ind. Present	<i>ā</i>	<i>re</i>	( <i>īu</i> )
Progress. Pres.	<i>engā</i>	<i>du</i>	<i>dang</i>
Past (Impf.)	<i>āhā</i> or <i>jak</i>	<i>bā</i>	<i>bai</i>
Remote Past	<i>cim</i> or <i>ācim</i>	<i>khā</i>	<i>dangman</i>
Future	<i>gen</i>	<i>nāng</i>	<i>gan</i>
Imv. 2d Person	<i>bo</i>	—	—
3d "	<i>cinā</i>	<i>ba-pu</i>	<i>thang</i>
Cond. Present	<i>ode</i> (ptc.)	<i>jadi</i> 'if'	<i>bā</i> or <i>blā</i>
Past (contrary to fact)	<i>gencim</i>	<i>kāde</i>	"
Pples. Present	<i>oā</i>	<i>hi</i>	<i>ni</i>
Pres. Cond'l	<i>ode</i>	—	—
Past	<i>e</i>	<i>hi-dādā</i>	<i>noi, nai</i>
Inf. —	<i>nā</i>	<i>mā</i>	<i>nū</i>

Garó has never developed a passive voice; but P.K. occasionally uses one, formed of the past participle and verb "to be," after the analogy of Hindu speech. Both languages have a "negative voice," which is formed by a syllable *jā* or *khujā* in Garó and *ā* in Kachari, inserted between root and tense-sign; but in the imperative both take a prefix *dā*, instead, which finds an analogy in the so-used *ta* or *te* of Ao Naga. The negative conjugation differs in a few other respects from the positive one. Both tongues freely compound the verb with other verbs, with nouns, adjectives, adverbs, and a variety of particles—a characteristic which puts them outside the monosyllabic class.

VII. *Syntax*.—The structure of the sentence is simple, and is substantially the same in G. and K. The verb stands last, and the subject—less invariably—first. The position of intermediate words, relatively to the verb, is determined by considerations of emphasis or euphony. Nouns or pronouns precede the words which they limit. Adjectives have no fixed position relatively to their nouns. Postpositions, which are often the locative case of nouns, take the place of prepositions. Relative clauses precede antecedent clauses; but, instead of these, participial and postpositional constructions are vastly more common.

Our conclusion from these data—but partly indicated here—is that Kachari and Garo are closely related tongues; but they also present points of contrast, which can only be explained when we are better acquainted with the speech of neighboring tribes.

6. Notice of Delitzsch's *Assyrisches Wörterbuch, Erste Lieferung*; by Prof. David G. Lyon, of Cambridge, Mass.

For the work of popularizing Assyrian study among Semitic students in general, and as an aid to the beginners in the language in particular, no book is now so necessary as a dictionary. The one by Edwin Norris, most valuable at the time when it was made, was never completed, is now out of print, and is below the requirements of to-day. In this state of affairs, the student must rely on the small but valuable glossaries of various Assyriological publications. Such glossaries suffice for the reading of many historical inscriptions, but they are frequently of small service for other classes of writing and their use is attended by much inconvenience. What is wanted is a good hand-lexicon of a thousand pages or so, giving the ascertained lexical facts, and devoting small space to what is only conjectural. Of course, the thesaurus and the concordance are also needed, as timely aids for the specialist; but before they are made, we should have a less pretentious work, a hand-lexicon.

For the preparation of such a work no one is so well qualified as the professor of Assyriology at Leipzig. It has been known for many years that Prof. Delitzsch was engaged on an Assyrian dictionary, and at various times we have hoped that its appearance might be a matter of the immediate future. At last we have the first fascicle of 168 pages from the well-known house of J. C. Hinrichs in Leipzig. Author and publisher announce that the whole work will comprise about ten such parts, which shall appear at suitable intervals. Each fascicle is to cost about 30 marks, so that the whole, if it does not exceed the estimated size, 1600 pages, will cost 300 marks, or \$75. It is a matter of regret that such a price places the Assyrian dictionary beyond the reach of many who ought to own a copy. But it is to be feared that the work will be much larger than author and publisher suppose. From a calculation made by comparing various glossaries with the contents of fascicle I., it would seem that the whole work, carried out on the same proportions as this fascicle, will contain something like 5000 instead of 1600 pages, and cost about 900 marks or say \$225. Only libraries and a few of the more fortunate specialists could afford to buy such a work.

Delitzsch's dictionary is intended to cover the whole published Assyrian-Babylonian literature, and a considerable part of that which is not yet published. His design is to lay a "broad, sure foundation" on which younger powers may build, and to prepare a work which shall be serviceable to all Semitists for comparative purposes. The author's guiding principle is to explain the Assyrian vocabulary from Assyrian sources, and only in the most important cases to refer to related words in the sister dialects. The dictionary is to be followed by indexes, and by notes, the latter intended chiefly to give the names of the scholars who first succeeded in making out the various stems and words. Such notes

might be of service, but it would be almost impossible to reach exactness, and they are likely to be the source of much contention. A dictionary of proper names will form the closing part of the work.

The mechanical execution of fascicle I. is beautiful. The nature of the work makes lithography a necessity, though type is always more agreeable to the eye. The successive stems are numbered, and are expressed in Hebrew letters. The Hebrew is omitted in case of those words of whose stems the author is in great doubt. The stems, and also the Assyrian words to be defined project to the left of the line. Assyrian words are underscored, those which are defined are also written larger, while the notes are written smaller than the body of the article. The paragraphing is in general good, but at times somewhat scant. The word *abûbu*, for instance, contains nearly two pages without a break to rest the eye, and there are not a few cases of a whole page without a paragraph. This criticism naturally touches only the long articles. The Hebrew letters at the top of the page are a great convenience.

Of small scribal errors and oversights I have noted the absence of the dot under *k* in *itêk* 33<sup>8</sup>, of the period after "Trauer" 34<sup>15</sup>, of the hyphen between the syllables *zak-ri* 38<sup>4</sup>, and of the underlining of the Assyrian words *nâšir*, etc., 37<sup>14</sup>, and *ša ana rigim* 153<sup>8</sup>. The figure 3 must be inserted after "Nr." 45<sup>12</sup>. In one case the author corrects in a note what he had written in the body of an article 75<sup>12</sup>, whereas a reading in 4<sup>19</sup> is corrected in a note 153<sup>14</sup>.

On the other hand, Delitzsch points out a number of mistakes which are due to the original scribe, as on pages 121, 122, 139, 146. Even Assyrian scribes were fallible. I have seen as many as half a dozen erasures on a single small tablet.

Delitzsch seems to be at a loss how he shall name the hero of the great "Izdubar Epic." No satisfactory proof has been offered that this hero was the same person as Nimrod, much less that the two bore the same name. It seems strange therefore to see the hero called *Namrûdu* on pages 25, 63, 91, 97, *Namrûdu* with interrogation mark on pages 37, 91, 96, 101, Nimrod on pages 52, 91, and Nimrod with interrogation mark on page 84. This inconsistency is, of course, inadvertent, but worse than the inadvertence is the adoption without sufficient proof of the long proposed identification. True, the hero was perhaps not called *Izdubar* but we have for that reading at least the natural values of the signs.

It is very tantalizing to be constantly referred to future fascicles of the dictionary, as on pages 91, 118, 131, 136, 140, 154, etc. In some cases it would have been better to give the explanation than to promise it, reference to something published being more satisfactory than reference to a work in preparation, if not so easy.

The arrangement of the stems is alphabetical, the derivatives coming under their respective stems. It is to be hoped that Prof. Delitzsch will re-enter some of these derivatives under their first letter with reference to the places where they are defined. There are some words which might easily be derived from several stems, and the re-entry should in such cases by all means be made. Fascicle I. contains 95 numbers, and discusses 188 words. The last stem is אר. The א, however,

represents five letters, corresponding to Hebrew **א**, **ה**, weak **ה**, and the two **י**'s. It thus appears that if fascicle I. had been devoted exclusively to the letter corresponding to Hebrew **א**, most of the words beginning with that letter might have been disposed of.

The work contains much matter besides what is strictly lexicographical. Of greatest interest and value are the comments on the various doubtful stems, discussions of ideograms, suggestions for completing words in mutilated passages of text-editions, and the publication in full or in part of important tablets or fragments of tablets. To the Assyrian student these will be very welcome. To the beginner or even to the general Semitic scholar they can not be of much practical service for the reason that he is not prepared to understand them. Omitting those cases where not more than half a dozen lines are given, fascicle I. contains as much as thirteen pages of texts, for the most part in transliterated form. Several tablets are given entire, as on pages 114-115, 141-143, 164-165, all being reports addressed to the king. Of greatest general interest is the large fragment of the fourth tablet of the creation series, p. 100. As has long been known, the Babylonian version of the creation of the heavenly bodies and of the animals was preceded by an account of the genesis of the gods, and a further account of the war waged between one of their number, *Marduk*, and the great dragon *Tiamat*. It is to this struggle, resulting disastrously to *Tiamat*, and her allies, that the new fragment given by Delitzsch is devoted.

With all one's delight at having such texts edited, one cannot approve of the plan of scattering them through the already burdened pages of a large dictionary. If the author does not choose to issue the texts in a separate publication, nor to offer them to some one or more of the existing journals, like *Zeitschrift für Assyriologie*, he might well place them with independent paging at the end of the several fascicles, so that when the work is complete, the texts might be bound into a separate volume.

There are also other materials in this work, which are most interesting and valuable, but which are not properly a part of the dictionary. In such a class I should place the long note, pages 64-66, on the word *ni-bi-ru* as one of the titles of the god *Marduk*, and the note of a page (50-51) on the tablets from the foundation of Sargon's palace. There are many other notes of a quarter or a half page in length, whose connection with the dictionary is not very close. This criticism does not touch the notes, but their length as a part of the lexicon. Still, one greatly prefers to have them as they are rather than not to have them at all.

A good deal of space might be saved if the author would make use of some symbol to express his doubt in cases where he does not know to what stem he should assign a word. He would thus escape the need of the oft-repeated statement that he places a word under a given stem with the greatest reserve, and only because the user of the book would be likely to seek the word under that stem. With the considerable number of Assyrian words of unknown meaning it is, of course, not possible to make a lexicon on a strictly etymological arrangement of stems, and a very simple device might indicate those words of unknown stems.

One might find fault with fascicle I. in the superfluity of elementary

matters, and of passages cited. Under the word *âbû*, 'father,' for instance, one is glad to see the various forms *a-bu*, *a-ba*, *a-ba-am*, *a-ba-(a)-am*, *a-bi*, *a-bi-ia*, *a-ba-ka*, *a-bu-šu*, *a-ba-šu*, *a-bi-šu*; but the references to some of these forms are needlessly numerous. Furthermore, it is only the beginner who needs to be told that *a-bi-ia* means 'of my father,' *a-ba-ka*, 'thy father,' *a-bu-šu*, 'his father,' etc. But most beginners will not be able to purchase such a costly book. Even they might better acquire such elementary matters in an Assyrian grammar. For their sakes, therefore, it would be well if the following fascicles were made on a scale very much reduced. The time is not ripe for a thesaurus, and the preparation of one is an undertaking too vast for any individual scholar. But for a convenient lexicon there is a pressing need.

Perhaps the most remarkable feature in the dictionary is the attitude of the author toward the famous *Sumerian-Akkadian* controversy. It has long been the opinion of most Assyriologists that a great civilization preceded that of the Semites in Mesopotamia, and was a powerful factor in the development of the Babylonian-Assyrian culture. To this civilization was ascribed the invention of cuneiform writing, much of the Semitic mythology and religious literature, as well as numerous words current in the Assyrian language. Indeed, where a word existed in Assyrian and in what was supposed to be the literary remains of this older civilization, some scholars went to the length of always claiming that the borrowing had been made by the Semites. More moderate students asked why the borrowing might not at times at least have been in the opposite direction. The representatives of this pre-Semitic civilization were supposed to be the inhabitants of the districts of *Sumer* and *Akkad*. Whether the civilization and the people should be called *Akkadian* or *Sumerian*, was for a long time a bone of contention. Finally the discovery seemed to be made that both names were right, and represented two branches of the same people, and two dialects of the same language.

Against all of this real or supposed discovery one distinguished scholar has for many years raised his voice in dissent. This was Prof. Josef Halévy of Paris. In opposition to the "Akkadists," he has long maintained that the civilization of Mesopotamia is distinctively Semitic, and that what was held to be non-Semitic literary remains is only a hieratic way of writing Assyrian. After fighting single-handed for a long time, he won to his view the brilliant and lamented Stanislas Guyard. It would now seem that Prof. Delitzsch has espoused the same cause. It is not long indeed since he announced courses of instruction in the *Sumerian-Akkadian* language. But it has been evident from his published utterances during the past two years that he was rapidly approaching the position of Halévy. In the 3d edition of his *Assyrische Lesestücke*, 1885, he rarely uses the terms *Sumerian* and *Akkadian*, preferring to say "non-Semitic." In Zimmern's *Babylonische Busspsalmen*, 1885, Delitzsch stated that his use of the expression "non-Semitic" had not been a mere matter of convenience, p. 113. In the same connection he expresses his approval of Zimmern's position that the Babylonian

penitential psalms, and many other of the "so-called bilingual texts" are not *Akkadian*, but of genuine Semitic origin, and adds: "I seize this opportunity for my part to recognize openly the high services of Halévy relating to the Sumerio-Akkadian question, above all to the question as to the existence of *original* Sumerio-Akkadian texts. It seems to me necessary to test anew, unbiased, in all details, this fundamentally important 'tradition' which has been delivered to us younger Assyriologists." In the foot-notes of his *Prolegomena eines neuen Hebräisch-Aramäischen Wörterbuchs zum Alten Testament*, 1886, there is much skirmishing with Halévy, but the disputed ground is etymology rather than *Sumerio-Akkadian*.

In reviewing this work in the *Revue des Études Juives*, Jan.-Mar., 1887, Halévy writes, p. 160, that he learns through a letter from Delitzsch that the Assyrian dictionary of the latter is to be pervaded by a "strongly anti-Sumerian spirit." Fascicle I. is a commentary on the letter, and shows how near Delitzsch comes to an agreement with the chief "anti-Akkadist." The change is seen in his treatment of syllabic values, and of words which have been regarded as of non-Semitic origin. When he uses the terms "*Sumerian*" or "*Akkadian*" at all, he frequently encloses them in quotation marks, as on pages 23, 32, 41, 88, 111, 138, 139, 140, 150, 155, 166. In cases where the quotation marks are wanting, the author uses the word "so-called," as p. 115, or adopts the terms as employed by others, as on pages 80, 89, 116, 118, 120. Among the words in fascicle I. which have been held to be of *Sumerio-Akkadian* origin are No. 14, *a-ba*, a certain official title; No. 23, *abkallu*, 'great decider;' No. 38, *abāru*, 'lead;' No. 51, *agubbū*, 'pure water;' No. 55, *agū*, 'crown;' No. 71, *ugaru*, 'field;' No. 75, *agarinnu*, 'mother;' No. 77, *adaguru*, 'censer;' No. 79, *ēdū*, 'flood.' On *a-ba* he remarks that the title is certainly good Semitic; on *abkallu*, that the derivation from a "*Sumerian*" *ab-gal* is extremely uncertain; on *agubbū*, that it is held to be a borrowed word from the *Sumerian* *a-gub-ba*; on *agū*, that if one feels compelled to consider it a foreign word, the form *a-gē* may best be considered as the "*Sumerian* original, but that against the assumption of borrowing, the weightiest objections exist; on *agarinnu*, for which he offers no etymology, that there is no reason to despair of finding one from Semitic sources; on *adaguru*, a similar remark; on *ēdū*, that its Semitic character is obvious when one compares the word with kindred forms. Unless I have overlooked the passage, there is not a single case in which he allows that a word is indisputably of *Sumerio-Akkadian* origin. In the notes also occur various words whose non-Semitic origin is denied or disputed, as p. 139, *šāru*, 'excess, 3600, *σάρος*;' p. 140, *mū*, 'name;' p. 166, *ēdinu*, 'plain.'

The non-Semitic origin of certain ideograms is also declared to be most doubtful, as those representing *tarbašu*, 'womb,' p. 118; *adaguru* 'censer,' p. 120; *sikkuru*, 'bolt,' p. 150. Syllabic values are also claimed as Semitic, which have been held to be certainly not so. Such are *nun*, p. 116; *ad*, p. 122; *mu*, p. 140; *kit*, p. 140. If these values be Semitic in origin, they may not be employed in reading non-Semitic texts, and Delitzsch makes this remark as to the syllable *kit*.



As illustrating his position on the subject of a *Sumero-Akkadian* language, two passages may be quoted from the notes: "But if my explanation of the two lines above is correct, there falls anew a glaring light on the supposed bilingualism of the respective texts," p. 68: "Therewith falls indeed a supposed most genuine 'Sumerian' word, which is absolutely indispensable for the reading of 'Sumerian' texts. Nevertheless one must hold himself ready, with ever more thorough penetration of the Assyrian literature, and ever deeper knowledge of etymology and of primary signification, to see yet many more such props of the 'Sumerian' invention of writing, and of the 'Sumerian' language break down," p. 139.

A monograph from Prof. Delitzsch on this subject is greatly to be desired. Indeed the matter is so important that we could even wish he might turn aside for a while from the work on the lexicon in order to prepare such a monograph.

Of the new and interesting remarks and translations the number is too large even to give a list of them, but a few may be mentioned. The passage in the account of the deluge which has been translated as referring to the future, is here referred to the past: 'Instead of thy having brought a deluge—lions, jackals, famine, or pestilence should have afflicted men,' p. 9. The excursus on pages 64–66 discusses the word *Nibiru* as a title of the god *Marduk*, and establishes the order of the first five tablets of the creation series. According to the exposition presented, the first tablet, beginning *ê-nu-ma ê-liš*, is the one of which a fragment has long been known recounting the genesis of the gods; the second tablet closes with the offer of *Marduk* to chastise *Tiamat*, after *Anu* and *Ea* have been in vain besought to do this; the third tablet records how the god *Sâr*, by reference to *Tiamat's* terrible companions in arms, induced the other gods to accept *Marduk's* offer; the fourth tablet recounts the battle and the victory of *Marduk*; the fifth, the preparation of the abode of the gods, and the ordering of the year and the months.

A passage from the deluge tablet receives a new interpretation on p. 120. The *adagur* vessels, used in the sacrifice after the deluge, Delitzsch takes to be censers, and they have poured into them (not put under them, as according to former translations) calamus, and other aromatic substances. The expression "seven and seven *adagur* vessels" he understands as meaning that seven censers were filled with calamus, seven with cedar, etc. He compares the direction in Ex. 30:34 as to the preparation of incense.

The Hebrew word **אָרָה** receives on p. 125 a new meaning and etymology. According to Delitzsch the word is inseparable from the Assyrian *êdû*, 'flood, mass of water.' The meaning 'mist' for **אָרָה** he denies altogether. The **אָרָה** of Ps. 32:9 Delitzsch also recognizes in the Assyrian *adû*, 'harness, bridle,' p. 144.

Among the many wrong translations corrected in fascicle I. are *êdû*, 'one,' p. 123, and *šibirru*, 'grain,' p. 68. The first word is shown always to mean 'flood' and the second 'staff.' On the other hand Delitzsch's reading *masnakti* instead of *mašnakti*, pages 35, 161, is

proved by a Nebuchadnezzar fragment in the collection of the Wolfe Expedition to be incorrect. This fragment divides the syllable *maš* into *ma-aš*. While the first radical is thus assured as *š*, the third may be *g*, *k*, or *ḳ*. The word *mašnak(g, ḳ)tu* can have no connection with *sanâku* 'to press.'

The late arrival of fascicle I. has not allowed time for any accurate examination of the strictly lexicographical features of Prof. Delitzsch's great work. This part of the notice I reserve for the future.

If the dictionary were finished, it would be a boon of priceless value to every student who could own a copy. On examining fascicle I. the reader feels that he is in the company of a man who is familiar with the large Assyrian literature and who has penetrated far into the secrets of its philology. If I have seemed to criticise the plan of the work, one of the reasons has been my fear that we may have to wait many years for its completion, or even that the author, though hardly yet in his full prime, may not live to complete his task. To indicate what a treasure the work is, one may refer to the treatment of the stems **אָל** *âlu*, 'city,' pages 5-9; **אָבִי** *âbû*, 'father,' pages 17-21; **אָנִי**, 'to be sharp, to project,' pages 37-45; **אָנַר**, 'to cross over,' pages 59-66; **אָנַת**, 'to destroy,' pages 71-75; **אָגִי**, 'enclosure,' pages 83-90; *ugnû*, pages 95-101; **אָנַר**, 'to enclose,' pages 105-111; **אָדַר**, 'to go,' pages 127-143; **אָדִן**, 'to be firm, strong,' pages 160-166.

To take up one of these stems and show what it contains, we may select **אָבִי**, No. 13, pages 17-21. Under this stem comes first *âbû*, 'father,' pl. *âbê*. There are four divisions: (1) Father in the sense of begetter, used of men and of gods; (2) Father in the sense of forefather, ancestor, of special frequency in the pl.; (3) Father as a title of reverence and affection, in an address to the moon-god; (4) Name of the necklace, *âbi abné*, 'father of the stones.' Then follows the list of the ideographic ways of representing the word 'father.' The two methods of saying 'parents,' by using the pl. of *âbû*, or by using *âbû* and *ummu*, 'mother,' together, are next explained. Two lines are devoted to *âbâtu*, 'fatherhood,' various proper names compounded with *âbû* are cited, and the article closes with a page of notes. The various forms *a-bu*, *a-bi*, *a-ba*, with and without suffixes, are given under No. 1. At the same place is explained the use of *âbû ilâni*, 'father of the gods,' as a title of various deities, *Bel*, *Asur*, *Anu*, *Ea*. Then comes the expression *bît âbi*, 'father's house,' and the use of *âbû* in connection with certain participles, as *bânu*, *âlidu*, *zârû*, 'begetter' (from the stems **בָּנָה**, **וָלַד**, **זָרַע**). The terms for 'grandfather,' *âbi âbi*, *âbi âbi âlidi*, and for 'great-grandfather,' *âbi âbi âbi*, with corresponding references, close the first division. Under the second division the use of *âbû* as ancestor receives many references and a list is given of the expressions *mahrû*, 'a former one,' *âlik mahri*, *âlik pâni*, 'one going before,' which emphasize more sharply the idea 'ancestor.' The term *ultu âbû*, 'from ancient times,' i. e. 'from the fathers,' is then explained. There is not enough material to make any subdivisions of paragraphs 3 and 4. The vastness of the undertaking and the incredible amount of labor necessary in the

preparation may be imagined from the fact that the first paragraph under *âbû*, 'father,' covering about a page and a half, makes no less than 122 references to the cuneiform literature.

The services rendered to Semitic study by the brilliant worker on the Assyrian dictionary fall short of those of no other man of the present generation. To prepare a lexicon on the scale planned by Prof. Delitzsch and to make one's way through the enormous difficulties which beset the explorer, is a monumental task. May his strength be equal to his large conception.

7. The discovery of the Second Wall and its bearing on the site of Calvary; by Rev. Selah Merrill, of Andover, Mass., late U. S. Consul at Jerusalem.

Dr. Merrill explained how he came to discover the Second Wall, upon the exact location of which so much depended. The conjectures of scholars had differed widely as to its location because they had had absolutely no hints to guide them. This wall is from ten to fifteen feet below the surface of the ground, and Dr. Merrill by great perseverance was enabled to have one hundred and twenty feet of it exposed. Had he not been on the spot to follow the matter up, the work would have stopped at half that distance. The stones lie on the native rock and are in some cases one, in others two, and in others three courses in height. The stones are ten feet and some of them twelve feet in length. As both the starting point and the terminus of this wall are now known, and one hundred and twenty feet of it actually traced, if it followed any natural course, it would inevitably pass at some distance to the west and north of the present Holy Sepulchre; which fact would be fatal to the claims of the latter as being the site of Calvary. English as well as American scholars regard this discovery of Dr. Merrill as one of the most important that have been made during the present century in connection with the topography of Jerusalem at the time of our Lord.

8. On Ikonomatic writing in Assyrian; by Prof. Morris Jastrow, Jr., of the University of Pennsylvania, Philadelphia.

The following is an abstract of this paper: A theory has recently been advanced by Prof. D. G. Brinton<sup>1</sup> to account for the transition from picture-writing (either imitative or symbolical) to sound-writing (again falling into the two classes, syllabic and alphabetic), which, aside from its correctness, calls attention to an important feature in the Egyptian, Mexican, and Chinese systems of writing that finds its counterpart in the Assyrian cuneiform. Between the method of expressing thoughts by means of pictures and the simple reproduction of the sounds of a word, Dr. Brinton assumes an intermediate stage in which pictures are used to recall words coincident or similar in *sound* with the object represented by the picture. Thus in Egyptian, *nefer* is a 'lute' and is represented by the picture of that instrument; but *nefer* through a coincidence of sound (not identity of stem) has also the significations

<sup>1</sup> On the ikonomatic method of phonetic writing with special reference to American Archæology, in the *Proceedings of the Amer. Philos. Soc.* for October, 1886.

'door,' 'colt,' 'conscript soldier' (as in English we have *pear*, *pair*, *pare*), and accordingly the same picture is used to denote any of these words, generally with the addition of some distinguishing determinative to indicate which one of the various *nefers* is meant.<sup>2</sup> To this method of writing, which as will be seen, is identical in principle with the ordinary rebus, Dr. Brinton gives the name of "ikonomatic,"<sup>3</sup> because, as he says, it is a writing by means of pictures (*eikón*), not of things—and therefore "rebus" is an inexact term—but of the *names* (*ὀνόμα*) of things, or as we might better say of their *sound*.

Instances are adduced to prove the existence and extended use of the ikonomatic method of writing in the Mexican and Mayan systems, where the principle is carried to much further excess than in Egyptian, a remote similarity of sounds—a far-fetched pun as we might say—being sufficient to warrant the use of a picture in this way. And the Chinese,<sup>4</sup> which, because of its strong tendency to monosyllabism, is excessively rich in homophonous words, lends itself even more readily to such a method.

The following examples from the Assyrian find a satisfactory explanation on the same assumption that identity and in some cases similarity of sound has led to the employment of a sign to express various objects, not otherwise related.

(1) The sign compounded of *ka* and *mit* (No. 16 of Delitzsch's *Schrifttafel*)<sup>5</sup> is the ideograph for *imtu*, 'breath,' and *imtu*, 'fear,' the former probably from a stem אִמָּה, the latter from אִים.

(2) The sign *nam* signifies *šimtu*, 'fate,' and *sinuntu*, 'swallow,' where we have a similarity of sound suggesting a word totally distinct in stem and meaning, since there is nothing to justify the explanation sometimes brought forward that the swallow is represented by this sign as being the bird of fate.

(3) *Gi* is *kanu* (קִנָּה), 'reed,' and *kēnu* (כֹּן), 'faithful.'

(4) No. 94 stands for *erû*, 'box, chest,' from חֶרֶה (?—like Arabic *ḥarâ*), and then by an extension through identity of sound for *êrû*, 'bronze,' from עֶרָה.

(5) *Dup* is *duppu*, 'tablet,' and also *tabaku*, 'pour out.' The similarity in this case is, it must be admitted, remote; but the examples given by Dr. Brinton from the Mayan scrolls (p. 9 f.) show that the principle can be carried to much further excess.

<sup>2</sup> Such a use of pictographical signs must of course be sharply distinguished from instances where an association of ideas, near or remote, extends the meaning of a sign. So Dr. Brinton himself falls into the error of classing *good* (for which in Egyptian the same picture of a lute is used) together with *door* etc.; but in this case we clearly have absolute identity of stem and not mere coincidence of sound: *nefer*, 'lute,' and *nefer*, 'good,' being the same word, and the instrument probably receiving that name because it was considered good, just as in the Semitic languages the *camel* is the 'beautiful.'

<sup>3</sup> More accurately "ikon-onomatic."

<sup>4</sup> See Wuttke, *Entstehung der Schrift*, p. 268 f.

<sup>5</sup> In cases where the phonetic value is uncertain or unknown, the number of the sign as given in Delitzsch's *Assyr. Lesestücke* (3d ed.) is quoted.

(6) No. 116 is the sign for *šēru* (שֶׁר), 'field,' and again—a very clear instance of ikonomatism—for *šir* (שִׁיר), 'against.'

(7) *Ne* is *išatu*, 'fire' (אֵשׁ), and *eššu* [for (ḥ)*edšu* חֶדְשׁ], 'new.'

(8) *Hi* for *ašaru*, 'to be favorable,' and also for *šar* (σάρος), the numeral for 3600.

(9) No. 256, *tukultu*, 'help,' and *takiltu*, 'face,' 'apparition.'

(10) No. 308, *libittu* (לִבְתָּ), 'brick,' and *lipittu* (לִפְתָּ), 'fence.'

(11) *Ku* is *šubtu* (וֹשֵׁב), 'dwelling,' and *šubatu* (צִנְתָּ), 'dress.'

(12) *Mē* is *ašibu* (וֹשֵׁב), 'dwelling,' and *išibbu* (חֶשֶׁב?), 'prince.'

The following for various reasons are doubtful:

(a) *Du* is *alaku*, 'walk,' and also *anaku*, 'lead.'

(b) *Mit* equals *nakbu*, 'hollow,' 'cave,' and (Delitzsch) also *nagpu*, 'weak.'

(c) *Am* signifies *rīmu*, 'wild ox,' and, according to a private communication from Prof. Halévy,<sup>6</sup> also *rēmu* (רָחֵם), 'mercy.'

This list, which might be further extended,<sup>7</sup> is sufficient to prove that the ikonomatic device is by no means of rare occurrence in Assyrian.

Dr. Brinton sees in all this the link between picture-writing and sound-writing, and endeavors to establish it as a general theory that the ikonomatic method of phonetic writing represents a stage through which every system of writing *must* have passed before reaching the purely phonetic stage. It cannot be denied that there is much to be said in favor of this theory. It fills out very satisfactorily the gap which has always been felt to exist between picture-writing and sound-writing. The use of a picture to recall, not a picture, but sounds, is certainly a step towards phoneticism, and one which it seems natural for people to take. And we can readily see how after this step has once been taken, the next one may follow, which consists in using a word or, by throwing off one or more of the final letters ("acrologism"), a part of a word, purely as a syllable entering into the formation of some other word; and this in turn, through the continuation and extension of the 'acrologistic' process, naturally leads to single letters instead of syllables.

Moreover, we can safely assume that the thought of using what was originally at least the picture of some definite object to recall the mere sounds of the object and not necessarily the object itself could only have occurred to people at a time when the picture—which gradually came to be drawn in mere outline—no longer accurately or definitely portrayed the object which it was supposed to represent. As long as

<sup>6</sup> Cf. moreover Halévy, *Aperçu Grammatical de l'Allographie Assyro-Babylonienne* (vol. ii. of 6th Oriental Congress), p. 4 f., where "homophonie" in Assyrian is touched upon.

<sup>7</sup> One might be tempted to add as a particularly striking example the sign *šah* used (a) for *šibirru*, 'sceptre,' from שִׁבְרָה, which can be further traced back to the biliteral elements שִׁב, giving us in Hebrew שִׁבֵּט, 'staff,' and (b) *šibirru*, 'harvest,' from שִׁבְרָה, a Šafel extension of a root בִּר which appears in בָּרַר, 'winnow,' בֵּר, 'grain;' but the authority of Delitzsch is now (*Assyr. Dict.*, p. 63) against the use of the sign in the latter sense.

the sign for *pear* was a real and a full picture of that fruit, it could only suggest to the eye and mind a pear; and it is highly improbable that as long as this was the case, mere similarity of sound with the word *pair* or *pare*, could lead to the extension of the picture for the purpose of conveying these words also to the reader. But when the picture has once undergone a decided modification from its original form, being either simplified for the sake of convenience, or, as frequently happened, a part being deemed sufficient to recall the whole (the horse's hoof for the horse, the head of the bull for the bull, and the like)—in short when the picture became a sign and a symbol rather than a picture, the chief obstacle in the way of an advance to phonetic writing, namely, the too exclusive appeal to the eye in the case of an exact picture, is removed, and the intermediate stage of ikonomatism follows very naturally; so that the *graphic* development accords very well also with Dr. Brinton's theory.

If, however, the explanation at present adopted by all Assyriologists, with the exception of Halévy, Pognon, and the late Stanislas Guyard, of the origin of the phonetic values of the cuneiform signs in Assyrian be correct, there is no room, as far as the latter is concerned, for such an intermediate stage. On the assumption of the non-semitic origin of the cuneiform writing, the phonetic values of the cuneiform signs in Assyrian are non-semitic, or, to use the more usual term, Sumero-akkadian words,<sup>8</sup> of which the ideographic values of the signs represent the Assyrian equivalents. Thus in the examples given above *nam* is the Sumero-akkadian word for Assyrian *šimtu*, 'fate;' *gi*, for *kanu*, 'reed,' etc. The Assyrians, according to this theory, when they adopted the cuneiform writing from the early inhabitants of Chaldaea, also took over the non-Semitic words and used them, as far as practicable, as syllables to form words (for which ideographs did not exist or which could not be expressed ideographically), and in particular also to indicate inflectional forms.<sup>9</sup> The Assyrians in this way reached the phonetic method of writing without any intermediate ikonomatic stage. This of course does not affect the existence of ikonomatism in Assyrian (or its importance) but simply the conclusion which Dr. Brinton draws from the occurrence of the phenomenon in the Egyptian and other systems of writing.

That the so-called "Sumero-Akkadian question," however, is still far from a definite settlement is very plain when we consider the recent and important modifications of views concerning it on the part of many Assyriologists—especially of Prof. Delitzsch, whose lately increasing reserve on the subject is particularly noticeable. Without going so far as Prof. Halévy,<sup>10</sup> therefore, who denies *in toto* the non-Semitic origin of

<sup>8</sup> Exception must of course be made for the large number of phonetic values which are derived from Assyrian words (by the acrologistic process) as *rēš* from *rēšu*, *lib* from *libbu*, etc., which are due to the further growth and development of the cuneiform system after the Assyrians had adopted it. See the list (which can be extended) given by Haupt, *Akk-Sumer. Keilschrifttexte*, p. 173.

<sup>9</sup> See the valuable discussion of the subject by Haupt, loc. cit., p. 163 f.

<sup>10</sup> His view is concisely given in his *Aperçu Grammatical*, above-mentioned.

the cuneiform writing, we must admit that the theories now current are likely to be still further and very essentially modified. And accordingly, pending their ultimate adjustment, the facts and analogies adduced by Dr. Brinton call urgently for careful consideration in the discussions of the question.

9. The Loḡman-legend; by Prof. C. H. Toy, of Cambridge, Mass.

The late, probably medieval date of the so-called Lokman fable-book is now generally admitted; much of its matter is no doubt ancient, but this, whatever its source, has nothing, as far as the testimony goes, to do with the Arabian sage, in whose history there is no mention of fables.

The Lokman-material, in chronological arrangement of the authorities, may be summarily stated as follows: En-Nabiga, El-'Asha, and Lebid refer to the story that Loḡman lived as long as seven eagles or vultures, the name of the seventh vulture, Lubad, is given by the first and third of these poets, and the second mentions Kail, who went with Loḡman as ambassador from 'Ad to Mecca, and was slain by God for his unbelief; in the Koran (Sura 31) Loḡman is a monotheistic sage, and a number of his sayings are quoted, and allusion to an apothegm of his is also found in Lebid: Ibn Ishāḡ speaks of a Majalla (=Heb. *Megilla*, 'book,' Sprenger, *Mohammed* i. 95) attributed to him (ed. Wüstenfeld, p. 284); Ibn Koteiba (Sprenger, i. 101) puts him under Hārith er-Raish, founder of the Tobba dynasty of Yemen; Ṭabari (ed. Barth, etc., I. i. 235-241) relates the occurrence of the drought in 'Ad, the sending to Mecca of the ambassadors, of whom Loḡman was one, the failure of the attempt to procure rain, the death of Kail, who refused to accept any fate but that of his people, the bestowal on Marthad of the gift of piety and truth, and Loḡman's choice of a life as long as that of seven eagles (each eagle living eighty years), and describes the catastrophe as follows:

"And when only the seventh eagle remained, Loḡman's brother's son said to him, O my uncle, there remains of thy life only the life of the eagle; and Loḡman said to him, O son of my brother, this is Lubad (which word in their tongue meant 'fate' or 'time')—and when Loḡman's eagle had reached a ripe age and the end of its life was come, the eagles flew in the morning from the top of the mountain and Lubad did not spread his wings among them, and Loḡman's eagles used not to be away from him, but were ever in his sight—and when he saw not Lubad with the eagles, he went up to the mountain to see what he was doing—and Loḡman felt himself weak as he had not felt before—and when he came to the mountain he saw his eagle Lubad fallen out from among the eagles, and he called out to him, Mount O Lubad, and Lubad essayed to mount, but could not . . . and they died both of them."

The Persian version of Ṭabari (ed. Zotenberg, i. 432), fifty years later than its original, describes, besides this 'Adite Loḡman, one of the time of David, a black sage of Ila, and friend of the Jewish king; in Mas'udi (ed. Barbier de Meynard, i. 110, iii. 366), A. D. 943, we have also a double

personage, he of David's time being described in nearly the same terms as in the Persian Ṭabari, and the 'Adite barely mentioned as the grandson of 'Ad, the builder of the dike of Mareb, and as having lived as long as a vulture (he quotes from a poem of El-Khazraji the line: "O vulture of Loḵman, how long wilt thou live?"); Beiḏāwi (on Sura 31, 11) describes the sage Lokman as a near descendant of Job and as living down to David's time; Abulfeda (*Hist. Anteislam.*, ed. Fleischer, pp. 20.116.174) has the double Loḵman, nearly as Persian Ṭabari; and he appears in many proverbs, in which there is reference to his personal qualities, as wisdom, strength, treachery, voracity, and to his longevity—other proverbs mention the embassy to Mecca; but it is difficult to determine their age precisely.

It appears from this statement that the Lokman-story suffered constant increase with time, as is the nature of such stories, and we must try to establish the earliest known form of the legend, that is the form it bore in the sixth century, when it was yet mostly unconscious, and had not been tampered with by history-mongers. A part of the above material may safely be rejected.

In the first place, the Jewish element may be thrown out. Though Jews had been settled in Arabia already several centuries in Mohammed's time, it is not probable that their sacred books were then known to the Arab people in such way as to affect the Arab folklore. In the Koran Mohammed talks as if this Jewish history were something new. Even if the people had caught from the Israelite residents scraps of their old histories, these would still be thought of as foreign. After the establishment of Islam and the rise of historical writing, the reverence felt for the old Jewish religion induced the Moslem writers to seek points of contact between old Jewish history and their own, and it was in fact out of Jewish material that they constructed their own *origines*. The relation of Loḵman to David and Job is a simple invention of a late period. And so falls away the necessity for a double Loḵman; we may dismiss the Jewish sage, and confine ourselves to the 'Adite.

Of the 'Adite story also as given in the Koran (Suras 89 and 7, 66 ff.) and the historians, much is pure fable. 'Ad and Thamud were in existence in the time of the geographer Ptolemy, and perished, not by wind and earthquake, but by a change in the routes of trade and the cessation of the commerce whence they derived their prosperity; see Sprenger, *Leben Moham.* i. 62 ff., 505 ff.; Loth, *Z.D.M.G.* xxxv. 622 ff. The story of the prophet Hud is a late invention, probably of Jewish suggestion; probably also the drought and the embassy to Mecca are embellishments. The 'Adites are described as Aramaeans (Koran, Sura 89, and historians); they lived north of Mecca, and there seems no good reason to suppose a tribe of that name in Yemen. Some connection between Loḵman and 'Ad is to be assumed.

No stress can be laid on the part that Yemen plays in the story. That the Koran (46, 20) assigned 'Ad to the south was sufficient reason to the historians and commentators to elaborate a Yemenic history of the tribe. Why Mohammed thought of Yemen is not clear; perhaps because he knew of ruins there like the northern 'Adite (Sprenger, as



above; more probably because of the presence of Yemen tribes in the north and the confounding of them with the original inhabitants. It is not likely that he invented Al-Aḥkāf, 'the sand hills,' as the name of the 'Adite region; it was probably in the story that came to him. Possibly it originally applied to a northern region, and was only later referred to the Yemen coast because it had come particularly to designate the sandy district between Oman and Aden. (Kremer, *Sūdara-bische Sage*, p. 21, would nevertheless hold to a Yemenite 'Ad; but the authorities on which he relies are all influenced by the Koran. The etymology of the name 'Ad is not clear: and it is not easy to say whether the adjective 'ādiyy, 'old,' is derived from the name of the tribe.) In any case Loḵman's connection with Yemen must be given up. The Arab histories of Yaman were compiled (doubtless from native southern sources) under the influence of the Koran and the distortions and confusions of Jewish traditions that followed the rise of Islam.

That part of the legend which makes Loḵman a Nubian and a slave is to be rejected. It arose either from the connection between Nubia and Yemen, or else from the desire to enhance the hero's wisdom by a sharp contrast of origin.

These deductions made, the legend of Loḵman in the sixth century may be conceived to have been somewhat as follows: he was a wise man of the tribe of 'Ad who survived the destruction of his people, and lived to a great age, as long as a vulture or as seven vultures.

Can we interpret this of an individual man? The improbability is great that the Meccan Arabs would hold in memory such a history of a foreigner; of their own people they remembered only ancestors and heroes of combats a few generations back. Loḵman is not a warrior, but a sage; and his story, with its legendary coloring, differs greatly from the memories of feuds, raids, and combats that are preserved by the poets respecting their own countrymen. He is an Arab, but he lives in a remote region and a dim period. This difficulty has been so strongly felt that the attempt has been made to identify him with some known personage of history or tradition—that is, of course, to make him Jewish, though this must be difficult in face of the fact that he seems to be a part of the Arabic folklore.

Derenbourg (in his ed. of the Fables) has suggested that Loḵman may be the same with the Biblical Balaam, the two names having the same meaning ('devourer'), that is, the Arabs translated the Hebrew name. This is not probable because no example of such translation is elsewhere found; in the Koran the Biblical names from Adam to Mary are transferred; Idris, 'the Learned,' of Enoch, and Du'n-Nun, 'He of the fish,' of Jonah, are descriptive epithets. Balaam would probably have appeared in the Koran under his own name. Nor is it likely that he was transformed at an early period and so taken by the early poets and Mohammed. If this had occurred, we should expect to find in Loḵman some reminiscence of his Biblical prototype; but there is none, except that both, in the later Moslem account, are servants of Allah. Balaam's history is given in Ṭabari (ed. Barth, I. ii. 508), and is supposed by some commentators to be alluded to in the Koran (7, 174).

Sprenger (*Leb. Moh.* i. 93) finds Lokman in the Jewish-gnostic Elxai, the presumed founder of the Elkesaite sect, living east and south of the Dead Sea in the second century of our era and later. His grounds for this view are that both Elxai (or Elkesai) and Lokman are monotheists, and that the sayings attributed to them begin in the same way, with the address "O sons" and "O my son." He himself does not regard these reasons as very strong. And, besides the difference of name and rôle between the two personages, there is grave doubt whether Elkesai is the name of a man at all, or only of a book, or, whether, if a man be intended, it is not rather an imaginary than a real person. The early appearance of Lokman as seemingly a character in the Arabic folklore would lead us to regard him as representing an Arabic figure of some sort.

Failing the attempts to find any satisfactory origin for him as an individual man, we might be disposed to think of him as a dim survival of legendary longlived ancestors, or as a deity. But neither of these suppositions has much in its favor. The Arabs had no myths or old legends—at least there is no trace of such stories. They were a people of feeble religious sentiment and short memory, without a pantheon, and without remote ancestors; the adoption of Islam enabled them later to dispense with gods, and for a respectable list of ancestors the historians had recourse to Jewish traditions and their own imaginations. Lokman, in the popular saga, could hardly have gone back to the days of the macrobites.

His connection with the vulture might suggest the Arab eagle-deity, and those eagle-like birds (unless they be Roman eagles) found by Doughty in 1875 at Madayn Şalih, the region of the old Thamud (*Documents épigraphiques recueillis dans le nord de l'Arabie*, Paris, 1884, p. 16). But elsewhere, in Koran, poetry, commentaries, and histories, many names of deities appear as such, and there seems no reason why the divine character in this particular case should have been completely forgotten. Doughty's list of deities contains no name resembling Lokman.

Possibly the conditions of the question may be better met by supposing the name to designate a clan or family that survived the extinction of the 'Adites. This event occurred after the beginning of our era, probably in the 2d or 3d century (compare Caussin de Perceval, *Essai sur l'histoire des Arabes*, i. 25 ff.; Loth, *loc. cit.*). The remains of the tribe's former greatness excited the astonishment of the neighboring peoples, and the catastrophe was interpreted by the Jews and Jewish Christians (Sprenger, *Leb. Moh.* i. 64) as a direct divine punishment. This was the account which Mohammed, perhaps with embellishments, inserted in the Koran; and so dim was the event to him that he could speak of it as belonging to a remote antiquity. If now several families or clans were all that survived to represent the old tribe, they would naturally appear in the tradition as individuals, and stories would arise to account for their escape from destruction. Such a story in the Old Testament is that of Lot saved from the destruction of Sodom, which is intended to account for the existence of a Lot-tribe in a region whose

former inhabitants were held to have been destroyed. According to Ṭabari (ed. Barth, I. i. 235) there were four 'Adite ambassadors to Mecca besides Lokman, of whom only one, Marthad, is said to have escaped with his life (p. 240). If the names Lokman and Marthad should be found in North Arabia as names of tribes, that would supply the evidence needed for this hypothesis; so far, however, the names have not been found, though Martab occurs in Doughty's list as name of a deity. The Ṭabari MSS. fluctuate in the writing of the names.

On the supposition of the survival of a Lokman-tribe we can account with some probability for the development of the legend in its present form. The name Lokman was connected with 'Ad and naturally followed its fortunes. First geographically and religiously. The 'Ad-legend was worked up under a double influence, Jewish and Yemenic. To the former we must refer the history of the prophet Hud, and Lokman's relations with Job and David; to the latter the Yemenic history of Lokman, his becoming king of the "Second 'Adites," and his building the dike of Mareb, his relation to the founder of the Tobba-dynasty, Hārith er-Raish (Mas'udi, iii. 366, Caussin de Perceval, i. 16 ff.); Hud also was transferred to the South. In the "Second 'Adites" we have the reminiscence of a survival of a portion of the tribe. The tradition assigns Lokman to various points in the legendary history.

Since this family survived, the legend would naturally represent it as having received the gift of long life, and this, from the Jewish point of view, would be regarded as the reward of piety. The connection with the longlived eagle would then easily follow. The Arab story, as given by Ṭabari (as above), conveys also a moral-religious lesson: Lokman and Marthad were assured that the gifts they received would not make them immortal; the seventh eagle, Lubad, is "time" or "fate," which brings everything to an end (so in Nabiga, as above). This form of the story is pre-islamic. Marthad receives the gift of piety; this perhaps points to some differences in the character and fortunes of the clans of Lokman and Marthad.

Once established as a popular hero, Lokman would give birth to proverbs; a large number of these are given by Hammer-Purgstall in *Jahrbücher der Literatur*, vol. 97, pp. 34-42, and in *Literaturgeschichte der Araber*, i. 36 ff.; they add nothing of importance to the material already cited. The fact that he appears only as sage or warrior, never as prophet, agrees with the supposition that his legend is in good part of Arab growth.

As to the form of the name Lokman, it might belong to a person or to a tribe. Tribes and families were sometimes called by a single name, without the prefix *banu*; see Nöldeke in Z.D.M.G., xl. 170 ff. The omission of the "sons" may be simply an abbreviation, or the name may have been originally that of a place. Tribal names ending in *an* occur abundantly in all parts of Arabia (many are given in Wüstenfeld's *Arabische Stämme* and Kremer's *Südarabische Sage*), and the termination is also found in names of places. "Lokman" is given as a place-name by El-Bekri in his *Geographical Dictionary* (ed. Wüstenfeld, p. 495): this, he says, is the opinion of Abu 'Amr and Ibn El-Kelbi, who

cite from Nabîg'a a verse in which mention is made of a journey "from Beit Ras to Lokman;" Beit Ras, according to El-Bekri, p. 189, is a fortified place in Syria. El-Asmai, however, regards the Lokman of Nabîg'a's verse as a man, a wine-dealer (the poet is speaking of the transportation of wine from Beit Ras). El-Bekri does not give the position of Lokman; there is nothing in what he says to prevent our putting it in Northern Arabia. If there was such a place in that region it would give some support to the view that the tribal or clan name Lokman was derived from or otherwise connected with the name of a place.\* It is of course possible that it was also the name of a deity, though there is no evidence of this.

10. A Syriac Bahîrâ Legend; by Dr. Richard J. H. Gottheil, of Columbia College, New York City.

Among the many forms with which the polemic literature of the Middle Ages clothed itself, that of the Apocalypse was a very favorite one. We possess a whole literature of such writings in Arabic, Hebrew, Syriac, and Latin. The point of this polemic lay often in the attempt to show that one religion had borrowed largely from a sister-religion.

No religion gave an opportunity for a polemic on these grounds as did the Mohammedan. Born in the full light of day, with enemies surrounding it on all sides, who were only too willing to note everything which might possibly tell against its founder, secrecy was impossible. A minute tradition of the sayings and doings of the Prophet, gathered together at no very late date, has put us in the position of seeing, as Renan cleverly says, a religion whilst it is being born.

Mohammed played a high game. It was either win or lose. He had taken it upon himself to astonish the Meccans with his knowledge of the history of their supposed ancestors, to put himself on a par with Jews and Christians by making a book the basis of the new religion. For this he needed material, which he took, without any scruple, from every possible quarter. At first this seems to have been done in good faith, at least as long as Hadig'a lived. Increasing knowledge did not benefit him morally. His most difficult task was to raise himself out of his own *G'ahiliyya*. He had involved himself—perhaps unintentionally—in contradictions of all sorts, which his Jewish and Arab opponents were not slow to point out to him. He had recourse to lying and fabrication. If we read the *Qur'ân* chronologically, we can see how Mohammed gradually learned one thing and another; corrected some of his former utterances, patched them together, and added to them.

The question naturally arose: whence did Mohammed get this information? Tradition has stepped in and given us the names of two persons, Waraqa, the learned cousin of Hadig'a, and Bahîrâ,<sup>1</sup> a Christian monk.

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\* Doctor Richard Gottheil has called my attention to a passage in Az-Zuzeni's *Tarikh al-Hukamâ'*, quoted in Amari's *Bibliotheca Arabo-Sicula*, p. 614, in which it is said that Empedocles received instruction from "Lokman the sage in Syria."

<sup>1</sup> On the name, see Sprenger, *Mohammed* ii. p. 384; Steinschneider, *Polemische und Exegetische Lit. der Juden*, p. 160; Nöldeke, *Z.D.M.G.* xii. p. 704.

We all know what Sprenger<sup>2</sup> has made out of this monk. Of Jewish descent, favoring Jewish-Christian ideas, he is represented as having been the mentor of Mohammed, the real power behind the throne. Few will feel able to follow Sprenger in this combination.<sup>3</sup> What Mohammed knew of the Old and New Testament, bears to the very largest part, the stamp of hearsay.

The Mohammedan tradition as regards Bahîrâ is, in the main, this:<sup>4</sup> either in his youth, whilst travelling to Syria for his future wife, or somewhat later in life, Mohammed came upon a Syrian Râhib (monk) who, by certain signs, discovers that he is the great prophet who is to appear.

This material has been made use of for many different legends. Such a one, in the Syriac language, I wish to present here to-day.<sup>5</sup> The text is taken from two Mss. in the Sachau Collection of the Berlin Library (Ms. 10 and 87). The one, in a Nestorian hand of about the 16th or 17th century, is defective both at the beginning and at the end. The second Ms. is written in a Jacobite hand of this century. The variations between the two texts are very great. The older Ms. has additions at the end which do not at all occur in the younger one. I can only give a short account of the legend here, as text and translation will appear in the Journal of the Society.

The heading of Ms. 87 runs thus: "Further, by the help of God, our Lord Jesus, our hope, I write the story of Rabbân Sargîs (Sergius), who is called the Saracen, Bahîrâ, and the Syrian. They call him hater of the cross; monk, who lives on Mt. Sinai; and [the story of] how he taught Mohammed. Amen." The speaker throughout is one Yêšu'yab<sup>h</sup> (Nest. 'Îsô'yab<sup>h</sup>) the Anchorite. The first part seems to be based on a history or legend of this Mâr(i) Sargîs. He came into conflict with his ecclesiastical superiors for having preached the worship of only one plain wooden cross; for, as he said, the Messiah was crucified only upon such a one. He was driven from his church, and came to Yathrib (Medina). Here he was well received by the Ɣat'hôlikâ Sab'rîsô' (سجبريسو), the same who, as Yêšu'yab<sup>h</sup> tells us, converted Na'man, King of the Arabs, by means of his power of healing. He had come to Yathrib by way of Sinai, Egypt, the valley of Scete (اتصميد), and Thebais (التيه). In Yathrib he finds Bahîrâ, old in years, teaching the Arabs from the holy books and prophesying to them about the fourteen kings who were to rule over them.

Sargîs is overjoyed to see him, having met no Christian for forty years. Now he knows that his end is at hand. He tells Yêšu'yab<sup>h</sup> the

<sup>2</sup> Sprenger, *Das Leben Mohammeds* i. 178 f.

<sup>3</sup> Nöldeke, *loc. cit.*; Kuenen, *Volksreligion und Weltreligion*, p. 298.

<sup>4</sup> Sprenger (*loc. cit.*) has gathered the Mohammedan traditions—see also ii. p. 384 f. See further Z.D.M.G. xii. p. 238 ff.

<sup>5</sup> This is the only Syriac version that I know of. It is probably identical with the Arabic versions in the Medicean, Paris, and Bodleian libraries. According to the Catalogue, the title of the Bodl. Ms. is: "Acta Sergii سرجيوس الراهب" qui ab Arabicis بكيرا vocatur." Steinschneider, *loc. cit.*

story of his coming to Yathrib, which is, in substance, as follows: He travels to Palestine to visit the holy places. Coming to the convent of Mt. Sinai, he passes a night on the top of the mountain, against the wishes of the monks. Here he sees a vision, which runs in the usual Apocalyptic style. He sees a white animal with twelve horns, a black one with seven, and then a bull coming along quietly. These are explained to mean: the kingdom of the Iṣmaelites, of the B'nai Hašem (صَدِّقُ مُحَمَّدٍ), i. e. the Abbasides, and of the Mahdî the son of Fatima (مَهْدِيٌّ بْنُ فَاطِمَةَ). He then sees a panther, a goat, and a lion. These represent the B'nai ŠFN, who will drive the Mohammedans back to Yathrib;<sup>6</sup> of the Joktanites; and of the last of the children of Hagar. He then sees a wagon, which is to represent the Romans, and a whale (Ms. 87, dragon), the sign of Antichrist. He sees Satan falling from heaven; after whom Elijah comes with the four angels. By one of these angels Sargis is taken up to heaven, shown the worthies of old, and the fires of the nether world. Here he adds, "All this I saw in spirit and not in my body."

The same angel then sends him to the Emperor Maurice (مَعْرُوفٌ), before whom he breaks his staff as a sign that the supremacy of the Romans (i. e. Byzantium) is coming to an end. Maurice listens to him quietly, but some of the nobles, under the leadership of Phocas (فَوْحَا) revolt. Thence Sargis goes to Persia, and does

the same thing before K<sup>h</sup>osro (كُوشْرُو Ms. 87, كُوشْرُو i. e. K<sup>h</sup>osrau II. Parviz). In Luristan he is again persecuted on account of his doctrines concerning the cross. He then goes to the Arabs and settles among them. After Yêšu'yab<sup>h</sup> has been there seven days, Sargis dies. His bones work miracles for some time afterwards.

Now to account for the fact that Mohammed was such a poor Christian, although, as is afterwards related, he was instructed by Sargis, a certain Ka'ab is brought upon the stage. He spoiled the work of Sargis, and made the Arabs believe Mohammed to be the forerunner of the Messiah.<sup>7</sup>


We now come to the real Bahîrâ story. It probably formed a distinct

<sup>6</sup> Ms. 10; but Ms. 87 reads سَهْجِي. At the end, where some of these names occur again, we read سَهْجِي, i. e. Sop'hyan, which is probably the correct reading.

<sup>7</sup> Probably Ka'ab el 'Aḥbâr, a Jew renowned for his knowledge of Biblical stories. He became a Mohammedan under Omar. Ibn Koteiba, p. 219:

كعب الاحبار هو كعب بن مافع ويكنى ابا اسحاق وهو من حمير من آل ذى رعين وكان على دين يهود وينزل اليمن فاسلم هناك ثم قدم المدينة في اصرة عمر ثم حرج الى الشام فسكن حمص حتى توفي بها ستة اثننتين وثلاثين في خلافة عثمان. Ms. 87 has حجت, which is simply a mistake for حجت, cf. Z.D.M.G. xxxiv. 738.




This is merely an outline of what the Ms. contains. A good many things, lying very distant from each other, are here brought together. Most of the persons mentioned can be readily identified. The assumed author seems to be Yêšu'yab<sup>h</sup> of Gadala, who, as we learn from Assemânî (B. O. ii. 416; the Bee, p. ) lived at the beginning of the seventh century.<sup>9</sup> It is impossible to tell how far he is the author; certainly not of the whole. The number of kings mentioned in the first part would bring the body of the story down to about the ninth century, the time of Harûn ar-Rašîd. In the tenth century we have the first mention of Bahîrâ being identified with Sargîs. It is by the historian Mas'udi. The final redaction, however, falls much later; as is shown by the mention of the Turks.

It is likewise difficult to say how much history there is in the figure of Sargîs. Perhaps the person intended is a Sargîs whom an historian mentions as having been born in Bê(i)t<sup>h</sup> Garmai.<sup>10</sup> But there are probably interwoven many facts belonging to the history of Sargîs, the patron saint of the Roman Syrians and Arabs. Great stress is laid upon the preaching of this Sargîs relative to the one cross. I do not know what historical fact the writer here refers to. That might give us a more definite clue. The Byzantine historians do call him a *ψευδαββάς*;<sup>11</sup> but I am unable to say whether the two stand in any relation to each other.

The writer lived probably in Persia. He lays great stress upon the coming of the Mahdî. The serpent which is to come at the end of the world is Zohak, the incarnation of Ahriman; who, the Persians believe, will then go through the world in triumph. It is the Persian Anti-christ.

11. On a Syriac manuscript of the New Testament belonging to the Rev. Mr. Neesan, by Dr. Richard J. H. Gottheil.

The Ms. measures 10 $\frac{1}{4}$  by 7 $\frac{1}{4}$  inches, and contained originally twenty-eight quires. Three leaves are wanting at the end, and one at the beginning. Quires 7 and 9 have only nine leaves each. There were originally 278 leaves. The Ms. is written upon parchment over which a certain preparation has been laid to facilitate the work of the scribe. The Ms. contains the usual P<sup>s</sup>ittâ version, with the usual omissions. The writing is in a bold Estrangela hand of the thirteenth century. With the exception of a very few places the Ms. is legible throughout. The colophons have suffered most, and are very illegible. The Ms. was finished on a Monday in 'Âb, 1518 A. Gr. or 603 A. Heg. = 1206-7 A. D., in the "Monastery of the holy Mâr(i) Mîk'hâ'êl, companion of the angels," situated in Hesnâ 'Ebhrâyâ [of] Maûsal. Mr. Neesan tells me he knows only of a Hesnâ Suryâyâ; but see the authorities cited by Payne Smith, col. 1338. The monastery is mentioned in 'Abbdîšô' of

<sup>9</sup> For Sab<sup>h</sup>rišô', see *ibid.*, p. 415; the Bee, p. .

<sup>10</sup> Assemânî, B. O. iii. 440.

<sup>11</sup> George Phrantza, p. 294: *ἡν δὲ τις ψευδαββάς ὀνόματι Σέργιος διὰ κακοπιστίαν ἐκ τῆς Κωνσταντινοπόλεως ἐξόριστος καὶ φίλος ἦν τῷ Βωάμεθ.*



The Ms. commences:

The superscription reads (the first two lines are illegible):

[illegible]

He then asks anyone who may find a mistake to correct the same; and gives the name of the *مصحف* *مصحف* *مصحف* for whom he wrote the Ms. On the last remaining leaf, in a later hand, we find the subscription of one Dawīd<sup>h</sup>, who corrected the Ms.

The Ms. is very carefully punctuated throughout, which gives it a certain peculiar value. I notice especially the use of a slanting line placed over the last letter or the letter before the last of a word. In many places the line is used in accordance with the rules laid down by the native grammarians for *naḡôdâ*; but the absence of its counterpart *ṡappayânâ* makes me skeptical on this point. The Ms. deserves a further examination in this direction. The text seems to show few peculiarities.

† i. e. میز.

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12. On the manuscript of a Syriac lexicographical treatise, belonging to the Union Theological Seminary of New York City; by Dr. Richard J. H. Gottheil.

In the year 1880, Prof. Hoffmann published a collection of grammatical and exegetical Syriac Nestorian writings under the title *Opuscula Nestoriana*. The first treatise is on words which are written alike, but pronounced differently. It is a late compilation of two previous works, one by Rabbân 'Nânîšô' of Had'yab<sup>h</sup>, i. e. Adiabene, 650 A. D.; and the other by the celebrated Honein bar Ishâk, who died in 873. Such treatises as these were much liked by Oriental grammarians. We have several of them in Arabic, Syriac, and in Hebrew. This little treatise, especially that of Honein is again interesting, as it shows us the influence of Greek learning upon Syriac Lexicography. This is not to be wondered at with a man like Honein. Nöldeke has already pointed out (Z.D.M.G. xxxv. 494) that the formula which introduces each rubric ܐܠܝܢ ܕܡܢ ܕܝܗܘܢܝܢ reminds one of the Greek *διαφέρει*, etc., and a number of the explanations given can easily be found in Hesychius, Zonaras, the Etymologicum Magnum, etc. The Ms. of the East India House, however, does not seem to contain a good text; towards the end, the scribe cut off whatever he considered unnecessary, i. e. a clear statement of the vowels, the Rukkâk<sup>h</sup>â and Kuššâyâ belonging to each word. For us, to-day, this is perhaps the most important part, and we are glad whenever we can recover the same. In a Ms. belonging to the collection of Prof. Sachau (No. 72), I discovered a few pages of this treatise, containing a fuller recension. This will be published at the end of my edition of the Grammar of Eliâ of Šôb<sup>h</sup>â. The Union Theological Seminary of New York came into possession, about a year ago, through Rev. James E. Rogers, of a Ms. containing this treatise as well as the second one published by Hoffmann. I was glad to find that this also contained the longer recension. But in addition to this it contains a large amount of matter which is not to be found at all in Hoffmann's edition. This gives the Ms. a great importance and may help to throw more light upon the origin of the two original treatises. I have carefully collated the Ms. and have noted all the variants of any value. The same I hope to publish in the Journal of this Society.

The Ms. is of quite recent date, 120 pages in all, written upon paper bearing a Russian watermark. To all appearances the archetype must have been an excellent one. It is a pity that the copyist did not take greater pains. Nearly every page of the Ms. bears evidence of the haste with which the work was done, and many passages have been omitted merely through carelessness. It is worthy of note that in this Ms. the name of the original compiler is sometimes 'Nânîšô' and at times H<sup>n</sup>nânîšô'. In the Berlin fragment it is only H<sup>n</sup>nânîšô'. It is the mistake of ignorant scribes, writing according to ear.

We are not told by whom the Ms. was written or at what time. The only clue we have is that it was written by an inhabitant of Mâhōzâ or the neighborhood. In a grammatical Ɣânûn which the writer has inserted on page 60 about the use of the contracted form ܐܡܠܐ for

𐬀𐬎𐬌𐬎𐬎𐬎, he bases his use of it upon its occurrence in the Bible, 'Aprêm and 𐬀𐬎𐬌𐬎𐬎𐬎. He then adds that we inhabitants of Mâhōzâ do not make use of that form, but the inhabitants of Hîrâ do. The present copy bears in some places the name K<sup>t</sup>âb<sup>h</sup>â d<sup>h</sup>lukâtê; the scribe was probably a certain Rûbîl D<sup>g</sup>ulp<sup>h</sup>âsan the son of Basîl, who copied a number of Mss. which have come to this country.

13. On Avestan Similes. II. Similes from the Animal World ; by Dr. A. V. Williams Jackson, of Columbia College, New York City.

Having discussed in a preceding paper \* the general characteristics of Avestan similes, and having examined particularly the similes drawn from the realm of nature, the author now took up the second division of the subject—the similes derived from the animal world. In the same connection also he reviewed the not uninteresting passages in which some of the Avestan abstractions and divinities are represented in incarnate forms resembling various animals.

The similes from animals and their actions, it was first stated, are proportionately numerous in the Avesta and are often used with considerable effect ; the fiercer beasts as well as the gentler appear before us—those which the Iranian hated as well as those which he loved. Thus we find things compared with the ravening wolf, and again with the timid sheep, with the loathsome frog (*vazagha*) and with the snake, with the beast of prey (*disu*), with the Khrafstras or noxious creatures generally, and with the fly. Resemblances are seen in the ways of birds, particularly the eagle (*saēna*), as well as indirectly in the characteristics of the vulture (*kahrkâsa*) and the fish, and likewise in the qualities of the horse, the camel, and the bull. Similes, moreover, it was found, are drawn from the dog, the guardian of the herd, and even so trifling a thing as a drop of milk affords a picturesque image.

Among the most striking, perhaps, of the similes in the Avesta, it was noted, are those in which (1) the wolf (*vehrka*) plays a rôle. This animal furnishes a likeness in three distinct passages, Vd. vii.53; Vd. xiii.8; Vd. xviii.38,44,50—the first of these being an instance of metaphor ; and in a fourth, Vd. xviii.65, it appears in an indirect comparison. These passages were each commented upon and the question of metre in each case discussed. In this connection the simile at Vd. xix.33=(?) Yt. xxiv. 27 in which (2) the sheep appears in direct contrast to the wolf was then taken up and parallels from the Bundehish, iii.12 (=ix.19, Justi) ; xxx.18 (=lxxiv.10, Justi) were cited.

The next animal noted was (3) the frog (*vazagha*) which was looked upon by the Iranians with horror. Reasons were given for preferring so to render *vazagha* rather than by 'lizard.' The three places, Vd. v.36 = Vd. xii.22, and Vd. xviii.65, were further examined, the first two of the passages being regarded as not metrical, the last as doubtfully so.

It was then stated (4) that the snake (*azhi*) is only found once in a simile, namely in the indirect comparison, Vd. xviii.65, just spoken of, where

\* See *Proceedings* for October, 1886 = *Journal*, vol. xiii., p. cxxxviii.

it figures in company with the wolf and the frog. At the same time special mention was made of the single instance of (5) a beast of prey (*disu*), Vd. xiii.47, furnishing an image to describe one of the characters of the dog. This latter passage afforded one of the rather uncommon instances of the carrying out of a parallel; although, as it was remarked, the comparison had more the nature of a description than of a regular simile. The text, besides, is unmetrical.

The brief comparisons in which (6) the *Khrafstras*, or noxious creatures in general, are found were then reviewed. The first of these, Vd. vii.2=Vd. viii.71, it was noticed, is unmetrical, owing probably to the extreme brevity of the expression; the other passage, Ys. xxxiv.9, proved interesting as giving us a simile in the *Gāthās*. The word *khrafstra* was further remarked on as used in the manner of a metaphor in Ys. xxviii.5, and probably also Ys. xxxiv.5=[Ys. xix.2].

Again in the passage Vd. viii.69,70=Vd. ix.25, where all that remains of the exorcised *Druj* is likened (7) to the wing of a fly (*mānayan ahē yatha makhšyāo parenem*), it was observed that the simile was more formal than real, amounting almost to an identification. The interpolated sentence in Vd. viii.22=(?) *Shāyast lā-Shāyast* ix.14, West, S.B.E. v. p. 314, and *Justi* s. v. *makhši*, was likewise added and attention called at the same time to the adjective *makhšikehrpa*.

Passing then to the creatures that are used in the *Avesta* with a more agreeable association, the two images (8) from birds were taken up. With the first of these, Yt. xiii.70 (*yathanā meregho huperenō*), the simile in *Rig Veda* viii.20.10 was compared; the second, an indirect comparison, Ys. lvii.28, had practically before been treated under the head of nature. Similarly also had the likeness drawn (9) from the eagle (*saēna*), Yt. xiv.41, been previously dealt with; but here the adjective *upairisaēna*, 'higher than the eagle flies,' as probably equivalent to a simile at Ys. x.11 and (?) Yt. xix.3, was noticed. Then the description in Yt. xiv.29-33 was cited as containing implied similes to convey an idea of the sharpness of sight; and among the animals here mentioned appeared (10) the vulture (*kahrkāsa*), whose 'glance,' Yt. xiv.33=Yt. xvi.13, is used typically as we employ the 'eyes of the lynx.'

The other implied similes in the same passage, namely (11) from the Kara fish, Yt. xiv.29, and (12) from the horse, Yt. xiv.31, found their place here, references for the thought being made to the *Bundehish*. The horse it was shown also appears in an implied comparison, Yt. viii.24, cf. Yt. xix.68, to convey the notion of strength, and in the indirect comparison, Ys. lvii.28, already several times referred to. The direct simile from the horse, in the corrupt passage, Yt. xxiv.29, was examined, and the question as to the meaning of the adjective *aspōstaoyāo* at Yt. v.7, and Yt. viii.5,42, discussed in detail.

At this point the implied simile drawn from animal strength, Yt. viii.24 (cf. Yt. xix.68 in part), was recalled as including (13) the camel (*uštra*) and (14) the bull (*gāo*).

Next, Yt. xi.7, *yathaca pasuš-haurvāonhō*, 'like the guardians of the flock,' although the word *spānō* is lacking, was regarded as a simile derived (15) from the dog; and further the fragmentary lines in Yt. xxiv).

44, it was thought, might be constructed into a metaphor or a simile ' [like] a mad [dog].'

The last question dealt with in regard to images from the animal world in general, was the simile (16) from the drop of milk, Ys. x.14, *yatha gāuš drafšō*, and in this matter Geldner's views, *Metrik*, p. 153, 160, were accepted.

In conclusion, the paper took up the passages where the various abstractions or divinities are given an incarnate form. These descriptions of transfigurations, as having somewhat the character of a simile, appropriately found their place here. It was mentioned as noteworthy that in far the greater part of these manifestations, the form conceived of was chosen from the animal kingdom; for example, in seven out of the ten incarnations of Verethraghna, the genius of victory, he is represented in some animal likeness. At Yt. v.61, Thraetaona appears in the shape of a vulture (*mereghahē kehrpa kahrkāsahē*), but on the other hand Ardvī Sura, Yt. v.64,78, in the semblance of a maiden (*kainīnō kehrpa srīrayāo*). The star Tishtrya takes the form of a horse, (?) Yt. viii.8; of a youth, Yt. viii.13; of a bull, Yt. viii.16, cf. also Vd. xix.37; and again of a horse, Yt. viii.18,20,26,30,46; his opponent, the demon Apao-sha, likewise is pictured as a horse, Yt. viii.21,27. Even the fiend Druj comes in a form like a fly, Vd. vii.2, as seen above, and Ahriman again, in Yt. xv.12=Yt. xix.29, is represented as ridden in the shape of a horse. The conscience, however, Yt. xxii.9, appears in the image of a maiden; but in Yt. xix.34,36,38, the kingly glory is seen in the likeness of a bird. Finally, in Yt. xiv., Verethraghna appears in his various successive incarnations, as a wind (§ 2), as a bull (§ 7), as a horse (§ 9), as a camel (§ 11), as a boar (§ 15, cf. also Yt.x.70), as a youth (§ 17), as the bird Vāraghna (§ 19), as a ram (§ 23), as a buck (§ 25), and lastly as a man (§ 27).

14. The Afrigān Rapithwin of the Avesta, translated with comments; by Dr. A. V. Williams Jackson.

The Afrigān Rapithwin is a colloquy between Ahura Mazda and Zarathushtra, and is preceded and followed by the common Avestan formulaic prayers and ascriptions of praise. Rapithwina is the genius of the midday and of the southern quarter. For the time and circumstances appropriate to the recitation of this passage see Spiegel, *Av. Uebersetzung*, iii. p. 196. As no direct English translation has previously been published, the present attempt to solve some of the exegetical difficulties of the chapter may not be uncalled for.

A. TRANSLATION. 1. *Yathā ahū vairyō . . .* : 'As he (Zarathushtra) is the wished-for spiritual leader . . . ' 'Righteousness is the best good . . . ' 'I confess myself a worshipper of Mazda, a follower of Zarathushtra, a foe to the Daevas, a believer in Ahura; for sacrifice, praise, propitiation, and glorification unto Rapithwina the righteous and guardian lord of right; for sacrifice, praise, propitiation, and glorification unto Frādatfshu and Zañtuma, (each) righteous and the guardian of right.'

2. 'Unto Ahura Mazda radiant and glorious, unto the Amesha Spēntas, unto Asha Vahishta, and unto Ahura Mazda's [son, the] Fire,

unto all the righteous Yazatas, spiritual and material, unto the mighty, overpowering Fravashis of the righteous, unto the Fravashis of the first believers, unto the Fravashis of the next-of-kin, be propitiation for their sacrifice, their praise, propitiation, and glorification.' *Yathā ahū vairyō* . . . .

3. 'Now surely spake Ahura Mazda to Spitama Zarathushtra the prayer of the guardian lord Rapithwina, (saying) :

"Ask us [O righteous Z.] the questions which thou hast for us—  
for a question by thee is like that of the mighty—  
since the Ruler (Mazda) would fain make thee contented and mighty."

4. 'Zarathushtra asked Ahura Mazda :

"Ahura Mazda, spirit  
most holy, righteous creator  
of earthly beings !  
How much does the man gain,  
how much does the man merit,  
how much is his reward,

5. who with the prayer of Rapithwina,  
praises [the guardian lord] Rapithwina,  
sacrifices to [the guardian lord] Rapithwina,  
with well-washed hands,  
with well-washed pressing-stones,  
with out-spread Barsom,  
with uplifted Haoma,  
with blazing fire,  
with recitation of the Ahuna [Vairya],  
from (i. e. with) the tongue of one who is imbrued with Haoma,  
from (i. e. with) the body of one who is subject to the law?"

6. 'Ahura Mazda answered him :

"In proportion as the wind (blowing)  
from the southern region,  
O Spitama Zarathushtra,  
promotes and increases  
all earthly life  
and comes to the earth with blessing ;  
so much does that man gain,  
so much is his reward,

7. who with the prayer of Rapithwina,  
*etc., etc., etc., (as in § 5).*"

8. 'Ahura Mazda pronounced to Spitama Zarathushtra the prayer of the lord Rapithwina.' 'Righteousness is the best good . . . .'

9. 'Ahura Mazda's *etc. (as Afr. i. 14-18).*'

10. 'As he (Zarathushtra) is the wished-for spiritual leader . . . . ' I pray for sacrifice, praise, strength, and power for Ahura Mazda radiant and glorious, *etc. (as in § 2)* . . . . for the Fravashis of the next-of-kin. So may it come to pass as I pray . . . . '

B. COMMENTS. To 1. *ašahē rathwē*: see Bartholomae's remarks in his *Arische Forschungen* ii. p. 179; iii. p. 45.

To 2. *khšnaothra* I consider a nom. like *tarōidite* Yt. i. 0, etc.; see Justi s. v. and p. 387 § 529 *fin.*; Bartholomae, *Ar. F.* ii. pp. 173, 186, *Handbuch d. Altiran. Dialekte* § 241; similarly *nemas* Ny. i. 1, etc. Cf. also *ušta buyāt* Yt. x. 91.

To 3. *mraoṭ*: 'spake the prayer.' For this use of *mrū* cf. Ys. liii.5, Geldner, *K.Z.* xxviii.191, Fragment iv.1,3, Geldner, *Drei Yasht*, p. 14, and Skt. *brū*, e. g. R.V. i.84.5. — *peresācā nāo* . . . is a quotation from Ys. xliii.10. — *thwā* . . . *émavatām*: the reading of Geldner's text at Ys. xliii.10 is here adopted, *thwā* being instrumental case. The sense, as Professor Geldner most kindly writes me, is that Ormazd is as glad to grant Zoroaster's request (*parštem thwā*), as one is to grant that of a mighty man whom one desires to place under an obligation. — *aēša* = 'contented' as in Vd. xiii.45: see further, Bartholomae, *K.Z.* xxviii.28.

To 4. *spēništa*: with the force of this epithet compare Milton, P.L. viii.492 "Creator bounteous and benign." — *cvaṭ hō nā aṇhuyāitē* . . . : on this passage, see Geldner, *Studien zum Avesta*, i. p. 143 note; Bartholomae, *Altiran. Verbum*, p. 143 note. — *cvaṭ—yatha—avaṭ*: *cvaṭ* has here the idea of proportion as in Vd. ix.9, *cvaṭ—yatha*, Vd. v.35; and similarly Vd. xvii.7 *avaṭ [aiṇi] yatha*. Again *cvaṭ mizh-dem—avaṭ mizh-dem* answer to each other in Vd. ix.43,44. The simile in the passage before us seems somewhat imperfectly expressed, as the answer to the question is not definitely given; but the general thought is, that the righteous man deserves and gains a reward as bounteous in proportion as the south wind brings growth and increase to the world—a thought which would appeal to those familiar in that country with the effect of the southern wind.

*aṇhuyāitē, ašayēiti, mizh-dem aṇhaṭ*: these words seem to be about synonymous, and merely elaborate the idea. Geldner derives *aṇhuyāitē* from *hu + ā*, "literally, 'sich bescheeren,'" thus *aṇhuyāitē* is, by the familiar error, for *aṇhuvāitē*, Skt. *āsuwāte*. — *ašayēiti*, which answers in form to Skt. *ṛtaya-*, seems here to have the meaning 'earn a recompense by righteous action,' cf. Ys. xlv.6, *ašem šyaothanāiš debāzaiti ārmaitiš*, Ys. xlv.15, and Bartholomae, *Ar. F.* ii. p. 139 f., 144, 161. It would thus be a denominative from *aša*, though possibly from *aši*. For a similar idea of reward resulting from sacrifice, see Ys. ix.9, *kā aḥmāi ašiš ere-nāvi*, etc., and elsewhere in the Avesta. — *nairē* must be omitted on metrical grounds.

To 5. This section, judging from Yt. x.91; Ys. lxii.1; Ys. xix.6, is probably metrical; but how we are to reconstruct, it is somewhat difficult to decide. In regard to *yō rapithwinahē ratufriti*, there seems to be no better expedient than to read *friti*, considering *ratu-* here and with the following accusatives as a later interpolation, as does de Harlez, *Manuel de l'Avesta*, p. 252. Some color of probability is given to this, since each time *ratu-* directly follows *rapithwina-*. The metre of the close of the stanza is somewhat harsh, particularly *uzdātāt paiti haomāt*, as in Yt. x.91—see Geldner, *K. Z.* xxv. p. 525, note 127—but it seems advisable to admit for the Avesta the existence of the catalectic seven-syllabled verse as Professor Lanman, *A. O. S. Proceedings*, May, 1880, does for the Veda. For *āthraṭ* we may otherwise refer to Geldner, *Metrik*, p. 33; while *paiti* and *ahunāt* are read with synesis, *vairyāt* being omitted as in Ys. xix.6.

The parallel lines *haomō-aṇharštahē*, etc. make some difficulty, since *māthrō-hitahē* (m.) cannot agree with *tanvō* (f.) as we should perhaps at



first expect. Different ways of solving the difficulty might be proposed, but it is best, as Professor Geldner kindly suggests to me, to regard *hizvō* and *tanvō* as abl. in connection with *framarāiti*, *frāyazāitē*. The words of prayer come from the tongue out of the body (= person) of one who is called *haomō-añharšta*, *māthrō-hita*. Then *harez*, when used of *haoma* and *zaōthra*, will, as he further suggests, mean (1) 'to pour or strain, offer, etc.,' cf. Vsp. x.2, and (2) euphemistically 'taste, enjoy, drink:' thus Ys. lxviii.10 *dahmō-pairiñharšta* means the offerings which were formally presented to the divinity, but in reality were enjoyed by the priest (*dahma*). The thought contained in *māthrō-hitahē tanvō* seems not unlike the New Testament idea, I. Cor. ix.27,20. The whole section metricaly reconstructed will read:—

*yō rapithwinahē [ratu-] friti*  
*rapithwinem [ratūm] framarāiti*  
*rapithwinem [ratūm] frāyazāitē*  
*frasnātaēibya zastaēibya*  
*frasnātaēibya hāvanaēibya*  
*frastaretāt paiti baresman*  
*uzdātāt paiti haomāt*  
*raocīnāt paiti āthrat*  
*srāvayamināt paiti ahunāt [vairyāt]*  
*haomō-añharštahē hizvō*  
*māthrō-hitahē tanvō.*

To 6. The introductory words *paiti-šē* — *mazdāo*, I should prefer to consider not metrical. — *yatha vātō* . . : we must seek here to reconstruct the metre, since from a study of Avestan similes I believe such comparisons to be in general metrical. This fact will enable us perhaps to take liberties with the text, with more confidence than we otherwise should. First, I consider that some word qualifying *vātō* has fallen out of the text. One or two might be suggested as answering the purpose, *mazdadhātō*, Yt. xviii.5; xiv.2; Ys. xlii.3; Vsp. vii.4 (though generally in connection with *darešiš*, but cf. Yt. xiv.2), or *derezi-takethrō*, an epithet of the southern wind at Vd. iii.42 *yatha vātō derezi-takethrō*, or again quite possibly *upa-vāvō*, Yt. xxii.7.

*rapithwitarāt naēmāt*: these words seem undoubtedly best taken to form a line by themselves and are metrical, as Vd. xix.1; Yt. xxii.25, (in antithesis to Yt. xxii.7); Yt. xxii.42, and in other designations of place, Vd. i.19; Ys. lvii.29=Yt. x.104. The line, however, wants one syllable as in the verse treated above. If the theory of the catalectic verse be not admitted, we might then supply the deficiency from the parallel line Yt. xxii.7 *rapithwitarāt haca naēmāt* and read in both places *rapithwitrāt*, as also at times *apākhdhrem*—see Justi, s.v., and Geldner, *Studien* i.p.113—and *ātrem* in the new edition of the Avesta. See further Bartholomae, *Ar. F.* ii.p.133. Still another view might possibly be suggested. Westergaard's reading in the passage before us is due only to "correction;" the manuscripts offer *rapithwen. tarāt* K. 25, W1,3, Lb2, Kh1; or *rapithwen. añtarāt* K19,12, P13. From this we might hazard a conjecture that the adjective is formed from *rapith-wina-*, and that the true metrical reading in both places should be *rapithwinatarāt naēmāt*, with *haca* omitted as it is here and not infre-

quently, e. g. Vd. iii.42, et al. From the formulaic character of the line, however, it seems to me at present more reasonable to scan it on the theory of the catalectic verse, especially as we do not yet know what the variants at Yt. xxii.7 are.

*spitama zarathuštra*: the vocative, with the order adopted, will also form an independent line as often. But other arrangements of the above six words are possible. — *saošyañtica*: this ungrammatical interpolation is faulty and should be rejected as the introduction of a later hand.

*aiwica* . . : the ordinary text *aiwica ašāiti jāmāyēiti* can hardly be made metrical, and we must look for another reading. In the absence of better manuscript authority I would suggest, though with some misgivings, that K12 possibly comes here to the rescue. It offers *aiwi jasāiti zām yāiti*, and from this with the aid of the other variants we can make up a very good reading. The *ja* in *jasāiti* is only an error of the copyist for *ca*,—on a similar interchange of *c* and *j* see Geldner, *Drei Yasht*, p. 138, *Studien*, i. p. 72 note, and Ys. ix.15; xi.7, et al. This satisfies us that *aiwica* is correct and that *šāiti* not *ašāiti* is alone the true reading, the *a* being dittography. Further, I would adopt *zām yāiti*, which gives an excellent sense and carries with it much probability, the interchange of *z* and *j* being by no means rare, cf. the variants at Ys. i.6; ii.6; viii.3,9; ix.4,8,14; x.14, etc. in the new edition. Thus *šāiti* will be instr. or dat. after *yāiti*, and with *aiwi*—*yāiti* compare PWb. *yā + abhi*. The text reconstructed will thus read:

*yatha vātō . . . .*  
*rapithwitarāṭ naēmāṭ*  
*spitama zarathuštra*  
*vīspem ahūm astvañtem*  
*frādhatica veredhatica* [*saošyañtica*]  
*aiwica šāiti zām yāiti.*

15. On the *Vyūha* or 'Battle-order' of the Mahābhārata; by Prof. Edward W. Hopkins, of Bryn Mawr, Penn.

The battle-order as depicted in the eighteen days' war formed the subject of this paper (enlarged from scattered references given in a paper last year). The writer had re-read the war with special attention to this point and sketched the arrays as described therein, giving some general remarks on usage in battle. The authorities upheld by the epic heroes are Bṛhaspati and Uçanas; each is mentioned several times, the former being the inventor of the *sūci* (which is never ascribed to Manu). Attention was called to the differences between the *vyūha* given in the Epic, and the same as described by such comparatively modern works as the Kāmandakiya and Nītiprakāṣikā. With Manu the agreement is fair. More *vyūhas* are employed in the Epic than are recognized by the law-book. On the other hand some of the Manavic *vyūhas* are not (practically) recognized.

A question here in regard to this word in Manu (vii.187–192). It is commonly taken as 'order of march,' and there would thus be no reason why the *vyūha* in Manu should correspond with the battle *vyūha* of the Mbhā. Is it not possible, however, that the marching laws are finished

with the introduction of *vyūha* in Manu and that the passage cited refers (as the word does in the Epic) to 'battle-array,' *mārga* being 'maneuvers' (*yuddha mārga*), *gulma* (190) being 'squads,' *sthāne*, *yud-dhe* being 'when the fighting ceases (and) in actual conflict'? This was given as a suggestion only. The use of *gulmās* for 'picket and fighting squad' was shown in the Epic.

In the Epic (except in late passages) the army is *caturbhāga*, *catur-aṅga*, 'fourfold,' in xii. and in Manu, *ṣaḍaṅginī*, 'sixfold.' To foot, cavalry, chariots, elephants, come *koça* and *yantra*, according to the passages of later origin.

The army arrays itself at dawn; fighting begins as soon as the hymn to the Sun is said; the armies go back to their tents the moment the sun sets. A single night is spent in fighting with torches. The chiefs go to bed as soon as they can after eating and bathing. If the commander is killed, the fight becomes a rout. The commander's position was discussed in three lights, that in respect of his king, in respect of the other generals, in respect of the whole army. He is often set aside. All his duties are taken by the king. He is superior *ex-officio* to those better born than himself. He first addresses the soldiers in a spirited speech. On his fate depends the battle of the day. A picture of the election of a commander was drawn. The king does not appoint one of himself. He is proposed in council and approved by acclamation after the king has 'entreated him' to be commander. The king's strategic position is nominally in the most protected part of the *vyūha*; often actually in mid-fight. A slight tendency was observed to praise the Pandu King as more ready to be in the van than the Kuru. The leaders had *cakra-rakṣāu*, not common soldiers, but a chariot-guard of two young high-born knights or princes.

The *vyūha* goes to pieces as soon as actual fight begins. The mass is drawn out on a fixed plan but in every case within a few minutes the 'array' breaks and all that seems left are the different forces stationed in general along a certain line, but these also soon get mixed. Championship duels are frequent. After such a rush *ante aciem* the chiefs sometimes 'return to their *vyūha*.' So complete is the disintegration of the day's *vyūha* that often another has to be made up. What is *vyūha*? Sometimes only a mass of men; sometimes a small group executing a particular maneuver; properly the whole array in a particular order.

A servile imitation of old *vyūhas* is noticed. One side does not hesitate to adopt a *vyūha* that has already proved worthless to the other side. The Pandus respect Bṛhaspati's advice and begin, being only about half as many as the Kurus, with a 'needle-shaped array.' The *makara* is employed once by the Pandus, and twice by the Kurus; the *ṣakaṭa*, twice by the Kurus, once with a beautiful *cakra* (*padma*) addition—the most complex array described. The *krāuñca* is used once by the Pandus and Kurus, once as a reserve. The *maṇḍala* is used as a complete 'circle' by the Kurus; and by the Pandus as 'half,' i. e. like *ardhacandra* or a crescent. The *gr̥gātaka* is entirely new, used by the Pandus. The *garuḍa* and *cyena* are only used by the Kurus and the Pandus respectively. Others, as *mānuṣa*, *dāiva*, are vague, and probably only allude to numbers and appearance, not to a technical array.

Whenever a 'beast' or 'bird' *vyūha* is described, the metaphor is kept up. 'Such heroes were on his beak, such were his eyes, such on his tail and wings and fore-wings' (*prapakṣa*! the metaphor mixed with actual order). The position of allies is not always the same. They are generally in responsible but not most important positions. The *Çakas*, *Yavanas*, etc., are occasionally conspicuous.

The hypothetical numbers of different divisions were given, as interpolations. None of the technical divisions holds; *camū*, etc., never mean a limited number. To 'protect' a knight (often devolving on certain friends) is to ride not before, according to the Hindu idea, but just behind him. The warrior would be insulted if the protector got between him and his foes. The root *rakṣ* is thus generally 'support,' not 'protect.'

The 'council' and castes of fighters were incidentally discussed. All castes but the Brahman are depicted as fighting; Brahmins did of old; the usage survives in Droṇa, and especially in his son, who is 'the priest's son;' but though called 'Brahman,' he is really only a fighter and has nothing to do with the priestly caste. In the present version, the Brahmins are relegated to the praetorium and act as council at night-debates. When the army is utterly routed, the ministers run away, taking the king's harem home in wagons.

The 'agreement of war' made at the beginning between the parties (resembling in substance Manu's chivalrous rules) is broken over and over again—in other words there was no agreement till a late interpolation made one. Significant is the fact that occasional unchivalrous behavior is not cried out against as violation of the 'agreement,' but as 'violation of eternal rule,' i. e. a few knightly rules were universally recognized, but often broken. However, when one blames Arjuna's conduct, one should not forget what provocation he had, and that the Kurus are continually fighting in the same way the Pandus do, that is, killing every one without regard to rules or order. A comparison of the four days to which the eighteen days seem critically reducible with the four days of fighting about Troy was resultless except for general images, and individual exploits.

The great chiefs can fight with any sort of weapons; the knowledge necessary for a good Senāpati is Veda and its six limbs, the *mānavī vidyā*, bow and arrows and various weapons, beside chariots. Usually even a leader of a *vyūha* keeps to one beloved weapon; his art, as shown, was chiefly, besides personal skill in 'maneuver,' directed to 'piercing' or 'surrounding.' No extensive combinations are made. The commander is in the middle van or, if he is not, the middle van (as usual) begins the fight. Occasionally it is the commander who guards the rear. No throwing out of wings first is tried, except in the 'crescent,' which must have touched the foe wing-first; but even here the fray appears to commence with the commander in the centre.

16. On Fire-Arms in Ancient India ; by Professor Hopkins.

I have in a former essay alluded to the theory of the author of ' Weapons, etc., of the Ancient Hindus,' editor of the *Nītiprakāṣikā* and *Çukranīṭisāra*, which works I shall here designate as W., N., and Ç. The theory has been reviewed before. My object in this paper is to call attention to a few points in the argument as developed in the books mentioned above.

First, the confusion which the author permits himself in alluding to works of different ages under one rubric of ' ancient ' can only mislead. All Hindu works that refer, or that he thinks refer, to the use of fire-arms are spoken of (apparently on that ground) as old, and any works helping to corroborate his theory belong to the ' oldest Sanskrit writings.' He refers thus to the *Kāmandakiya* (W. p. 69), though the work is really comparatively very late; he speaks of the *Nīṭisāra* which he edits as ' quoted in the most ancient and celebrated writings ' (W. p. 34), among which the *Kāmandakiya* stands side by side with the *Mahābhārata*. Here are two faults. The *Mbhā.* does not quote this work, and, if it did, no one has a right to cite together as ' most ancient and celebrated ' the epic and the work of *Kāmandaki*. In respect to the *Mbhā.* the facts are these. A comparison with the *Kāmandakiya* shows such technical parallels that we must conclude that this work is not many centuries remote from the time that produced the presumed work of *Uçanas*, whereas the quotations given from the *Mahābhārata*, in so far as they coincide with this *Uçanas*, give us merely such general aphorisms as may be found in any legal work from the *Mbhā.* down to the present time : an *Uçanas* the Epic undoubtedly quotes, and an *Uçanas*-code ; but nothing in the Epic would lead us to think that its writers knew this (modern) work. Again, using this word ' early ' of all literatures alike, the writer groups with other works the *Nāṣadha* as an " undoubted (sic) early poem " (W. p. 67) ; a statement that, for the application he makes of ' early,' is untrue.

A second objection to the writer's method of collecting evidence is found in the loose way in which he uses text and commentary alike, as if one bore any relation to the other in respect of value for his argument. He makes no attempt to discriminate between the worth of a text and the annotator of it who lived perhaps a thousand years later. Of course the words of the commentator in any such case as that under discussion are absolutely valueless unless supported by evidence from the text itself. Still less is any division made by the writer between different parts of the same work, so that he actually quotes a phrase from the *Harivaṅṣa* that he might as well have taken from the Epic. As to a suggestion that the twelfth book of the Epic may be later than the rest we find nothing; yet all the real proof of his position he draws from this late portion. Indeed, so void of critical sense or so prejudiced does this writer appear, that he proposed to insert a wild *varia lectio* into the received text of Manu, because a late work composed at a gun-powder age has the verse altered ; and instead of regarding N.vii.45 as a corruption of M.vii.90, he inverts the process, because N. would " not have dared to compose it after the text of Manu had been finally settled " (W. p. 71,

74, 43); drawing the result that the two works are of about the same age. Any one who can read through the *Nītiprakāṣikā* and our *Manu* together and then solemnly assert that they belong to about the same age is well fitted to draw the final conclusion that "fire-arms were known in India in the most ancient times" (W. p. 81), and "explosive powder . . . was known in India from the earliest period" (ib. p. 63).

We collect the proofs for these statements and find first some doubtful words in Vedic writings; on account of later writings our author regards these words as references to fire-arms. We come down to the later writings and find the proofs still fugitive, resting mainly on the interpretation given to these later writers by still later commentators. Having thus established gunpowder for ancient times, he reverts to our modern gunpowder-texts and carries them back to the 'time which produced the *smṛtis* and early Epic literature.'

I pass over many arguments that immediately present themselves against this deduction and come to the question: How does it happen that in the long and circumstantial account of the eighteen days' war there is not the slightest indication that gunpowder was known? His answer is ready: "It is most probable that the very common occurrence of gunpowder interfered with its being . . . worth mentioning" (W. p. 63). It is most probable that the guns used at the battle of Hastings were passed over by historians for the same reason.

But, jesting aside, here lies the defect that alone wrecks this argument. The writer will prove that the books he edits belong to the 'time of the early Epic.' It is not then enough for him to claim that gunpowder was known, or take refuge in its non-use on the battle-field. Indeed, as quoted above, he himself hints that it must have been so used—and so indeed, if the books are old; for they are full of minute directions in regard to small arms, and guns are assumed as not only known but in daily use.

I must confess to an ungenerous suspicion that the writer either clouded the account of the war in his own mind or was not well read in that account. He shows so few quotations that are really to the point from the period of greatest value.

Let me furnish a few references from this part of the Epic. The reader will at the same time remember that the works quoted at the head of this paper claim that *ṣaṭaghnī* is probably a rocket; *nālīka*, a gun; *yantra*, a cannon. Not that it is not admitted that they may be used otherwise. My contention is that in the cases I have noted from the early Epic they never can mean what he claims—and against the following I should like to be shown any use that justifies his argument.

But first a word on a point capable of doubt. We read "he saw *agnī-cakra* all around him," *Mbhā.* (vi.54.43). Is this word ever used otherwise than as a demoniac weapon of pure fire, indicating nothing but a supernatural power? No. Of the *ṣaṭaghnī* every hero makes use as a simple projectile. *Bhīma* meets a mass of weapons flung at him, and splits the *ṣaṭaghnī* which was among them with nine feathered arrows (vi.113.39 ff.; cf. vi.96.57 ff.). Again we read *śṛjanto vivīdhān bāṇān*

*çatagnñçca sakiñkinñh* (viii.14.35), that is, the thing had bells attached and was flung. Çalya also cuts a *çatagnñ* flung by Yudhiṣṭhira: "Na-kula cast a spear at him; Sahadeva, a club; Yudhiṣṭhira, a *çatagnñ*" (ix.13.32 cf. 26); the same weapon again (vii.133.44) is used with darts and other sharp weapons. It may be noted that, as respects the name, a *çakti* or spear is *ekagnñ* (vii.183.2), and an *añkuça* is *sarvaghñi* (vii.29.17), while darts are *çatrughnñh* (*khacarñh*, vii.156.132). Could *çatagnñ* come from *çatrughñi*? *Citra* (like *dīpta*), 'bright and shining,' is used of this and other weapons (vii.138.21) as are fire-epithets generally, to denote mere brilliancy. Cf. vii.115.30 and 119.32; *agnyarka-samkñçāḥ çarñh*; *alātacakrapratimañ dhanuñ*.

The word *tūpāki*, 'gun,' does not of course occur. As to the word *nālīka*, 'reed,' it is used only of darts, an important fact, as it, too, in the later language means gun. Lest any one should think that *karñi* prefixed made this word mean more, I would observe that the weapons forbidden by Manu are in common use—the *karñi*-dart is one with a barb or hook. A few quotations: *karñinālīkanārñcñ çhādayām āsa tad balam* (vi.106.13.); the weapons *karñinārñca*, *varñhakarñya*, *nālīka*, etc., are used as flung (vii.179.14); cf. *tañ karñinā 'tādayad dhñdi* (vii.47.20; ib. 169.9), and the pun, *sa karñam karñinā karñe punar vivyādha* (ib. 48.1), with, finally, the group of *karñinālīkanārñcñs tomaraprñsa-çaktayañh* (viii.81.12).

Our author is in doubt whether the divine *açani* may not mean fire-arms (from Dr. von Bohlen); cf. the *açani* (made by the gods) with 'eight bells' (*aṣṭaghañṭa*) flung as a missile by one man and caught by another (vii.156.157), or with eight wheels (a cannon?!) as elsewhere described (vii.175.96).

*Agnicūrñya*, 'powder,' I do not find mention of. *Açmacūrñya* is found, but it is the result of the mountaineers' *açmayuddha* (vii.121.45). As to the 'balls,' they are generally hand-missiles, used with clubs, etc. (vii.23.34); oil-balls at most are used; and nothing more are the *ayoguḍa* (loc. cit. et passim). As to *çara* meaning 'shot,' I have found no case that indicates such a transfer.

*Yantra* should, according to our writer, mean cannon. It is strange then that it means in the war almost anything but a cannon. It is a machine or contrivance of any kind, easily broken, grouped with ordinary arms, of more or less vague significance (vi.96.71); used as a drum-stick (*yantrenñ 'hanyamñnañ . . . mñdañgañh*, vii.23.85); as protective armor (*visrastayañtrakavacñh*, viii.93.9; *yantrabaddhñ vikavacñh*, vii.90.22; *yantranirmuktabandhanñh*, vii.93.70); it holds the flag (*papñta . . . çñrañh . . . yantramukta ñva dhvajañh*, vii.92.72) and—but cf. for more uses B.R.s.v. As a 'machine' it may refer to a catapult, and such is probably the meaning in the second and third *parvans* of the Epic, and the seventh chapter of Manu.

When we find *astrayantra* we ought certainly to have a cannon. Cf. the scene (ix.57.18): The two heroes engaged in a club-fight dance about each other, and perform all the maneuvers (*mārgañh*) resorted to by skilled combatants, agile as two cats (15,16), and,

*acarad Bhīmasenas tu mārṅān bahuvīdhāns tathā  
maṇḍalāni vicitrāṇi gatapratyāgatāni ca. 17.  
astrayantrāṇi citrāṇi sthānāni vivīdhāni ca  
parimokṣam praharāṇām varjanam paridhāvanam. 18.  
abhidraṇam ākṣepam avasthānam savigraham  
parivartanasamvartam avaplutam upaplutam. 19. Etc.*

We see that the best form of *yantra* gives no hold on 'cannon;' we see that neither here nor elsewhere do *ṣataghni*, *nālīka*, *yantra* indicate explosive powder. The same result for the whole war.

Now how is it in the twelfth book? Appealing here to *adhyāyas* 69 and 103, we might through the commentator be led to think of rockets and cannon. And yet there is nothing in the text to prove it, and the rest of the book has strong negative evidence against it.

In the first passage we read: 'The king must make walls with loopholes, fill the moat with sharp stakes, crocodiles, etc.; the gates must be small; *in* (or *on*) *the gates* he must cause to be placed *massive machines* (*dvāreṣu ca gurūṇy eva yantrāṇi sthāpayet sadā*), and have the *hundred-killers* mounted' (*āropayec chataghnīḥ*, 44). Immediately after this the king is told to go and visit stables, armories, and other public buildings; to store up in his fort oil, plants, poisoned arrows, with weapons such as spears, javelins, darts.

This represents an advance on the state of towns in the real Epic, but even here, remembering how vague is the meaning of *yantra* in the war-books and how specifically the *ṣataghnīs* are projectiles, we should hesitate to admit such an extraordinary interpretation as that of the commentator. In fact as in the "towns full of *yantra*" spoken of in the introductory books of the story we have here also no reason for assuming powder-machines, but only rams or catapults. The fact that no use is made of these in the whole tale would show that even regarded thus they were a late invention.

In the next passage (xii.103.38) the 'sixfold army' (a later division than the usual fourfold army of the Mbhā.) consists (beside horse, foot, elephants, chariots) of *koṣa* and *yantra*, treasure and 'machines'—cannon? It may be a battering ram; is there anything to indicate what it is?

Note also the fact that in a careful enumeration of methods of fighting as practiced by different nations no hint is given of this use of fire-arms already common, according to our author, and which must have been either strange to all or specially noteworthy in some: "Every man should fight according to his native usage; the Gāndhārāḥ and Sindhu-sāuvīrāḥ fight with knife and dart (*nakharaprāsayodhināḥ*); the Uçī-nārāḥ are good at all weapons; the Easterners, Prācyāḥ, excel in elephant-fights (*mātāṅgayuddha*), and are deceitful in fight (*kūṭayodhināḥ*); the Yavanāḥ and Kāmbojāḥ with those who live near Mathurā are good at boxing (*nīyuddhakuṣalāḥ*); the Southerners, Dākṣiṇātyāḥ, are swordsmen (*asipāṇayaḥ*). No fire-arms here (xii.101.1 ff.).

Our author states (W. p. 66) that he cannot find the passage referred to in Wheeler describing a fortified town, which would, he adds, be valuable evidence if found. On page 151, however, this same passage



is without compunction adduced again as the last and conclusive proof of the ancient use of gunpowder. In the attack on Dvārakā, in the ascent of Arjuna, and elsewhere, the author could have found both fortified towns and what is often translated 'cannon'. Most of these cases betray themselves as religious interpolations of a late date and certainly posterior to the 'early Epic;' but many even then will not bear the 'explosive' significance given by a too free rendering of the original.

We prefer to work backward to the ancient from the modern time, starting where we are sure. If there is no more proof than this for the use of powder in the real Epic, then the Vedic passages must stand by themselves. The Epic usage outside of doubtful cases manifestly far later than the real poem gives no support to the idea that the Vedic period saw more fire-arms than did the Trojan. From the Vedic through the Epic there is little to make us doubt that the cities had no walls with cannon at the gate and that the soldiers had no weapon but the knife, club, bow, and primitive *astra*. The present gunpowder books seem like old texts unscrupulously handled—not in the desire to deceive Europeans but to make an antiquated old manual useful. Most of the 'fire-arms' are in the latter portion of the work of Uçanas and the work is longer than it is said to be at the outset. There are signs enough of modernness and little to show its antiquity from its contents. No Smārta can believe that it belongs to the 'time of the *smṛti* and early Epic literature.' A patriotic Hindu may be pardoned for supporting such a claim with the best Indian ingenuity; an ingenuous observer must deny it.

#### 17. On Professor Bühler's Manu,\* by Professor Hopkins.

Prof. Bühler's Manu is a long-expected and very welcome book. We find here a new translation of the Bṛghu Samhitā, preceded by a valuable Introduction and followed by a most helpful Synopsis of parallel passages from a wide range of literature.

Of the translation itself it is not my purpose to speak. The fact that it was made independently of Burnell's (Books i-vii) renders of greater interest a comparison between these translations made by two of our first legal authorities. More help from commentators older than Kullūka has been had in the later rendering of the text, and the work is more valuable on that account.

It is of the Introduction that I wish particularly to speak. Every one who attacks Hindu law has a new theory to propound regarding the origin of Manu, the earliest metrical law-book. Prof. Bühler has advanced a fresh and very exciting theory. The views, hitherto, have been (after discarding the Hindu idea that the work was the product of an individual sage) that the code owes its origin to the prose *dharmasūtra* of the Mānavas, a modification being, again, proposed to the effect that part of our present *gāstra* came not from the *sūtra* but from popular sayings ascribed to Manu for authority's sake, and incorporated with the new form of the Mānava code. The presumed date of the present redaction has embraced a period of more than a thousand years, some

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\* The Laws of Manu, translated with Extracts from seven Commentaries. It forms volume 25 of the Sacred Books of the East.

putting it as early as the time of Buddha, some as late as the sixth century A. D. There has been a more definite view advanced a few years ago (oddly enough ignored entirely by Prof. Bühler) that restricts the time, place, and origin of the work to 500 A. D. under Pulakeṣi a Cālukya king—a theory probably more clever than correct but deserving notice.

Prof. Bühler accepts of course the general *sūtra* origin, and, further, believes that our Saṁhitā is not the result of a gradual change but that of an ictic conversion from a *sūtra* into a *çāstra* (p. xcii), at which time the un-Manavic dicta were added, not by Manavic disciples, but by outsiders. He explains the self-contradictions in the text on the ground that Hindu writers often put conflicting views side by side, and thus obviates (against Prof. Jolly's view) the necessity for remodellers. Against my own view of dicta incorporated by Manavic scholars he suggests, while admitting such incorporation in some degree, that this was done by the outsiders who converted a sectarian book into a general code. In other words, Prof. Bühler supposes a legal college that, unsectarian, and composed of specialists in law, seized the old Mānava-sūtra and made it the (Bhṛgu) Manu-Saṁhitā of to-day.

As to the time of the (Bhṛgu) Saṁhitā, Prof. Bühler sets the terminus a quo as "the age of the Mahābhārata;" the terminus ad quem as the dates of the metrical Smṛtis of Yājñavalkya and Nārada; though he admits that neither date is known. Narrowing down to a possible date between these limits, he gives the time for the conversion (of the *sūtra* into a metrical law-book) as about the second century A. D., concluding that the Bhṛgu Saṁhitā certainly existed then and was "composed between that date and the second century B. C." (pp. cxiv, cxvii).

With these termini there can be no great dissatisfaction. But it seems to me that in respect of the precise date accuracy is sought where accuracy cannot exist. Is it not a little over-accurate to deduce as early a period as the second century A. D. for the date of conversion when our data give only this: (a) priority of Manu to Nārada (exact date unknown); (b) the existence of varying glosses on Manu, possibly in the sixth century; (c) the priority of Manu to the Brhaspati Smṛti which perhaps dates 'about 600 A. D.'; (d) allusions in inscriptions (from 526 A. D. on) to Manu, vague as in the Epic, and an allusion in Bhāravi, (before 634 A. D.), to the 'path taught by Manu'?

From these data, however, the deduction is made, first, that the work must have been "much earlier" than the glosses (granted); second, that it "must have preceded it (the time of the Brhaspati Smṛti, 'about 600 A. D.') by several centuries" (unproven); third, that it is 'probable' that Bhāravi alludes to our Saṁhitā; and 'not improbable' that the same is true of the inscriptions. All ( $a + b + c + d$ ) "are sufficient to permit the inference that the work such as we know it existed in the second century A. D." (p. cxiv).

Now I have no doubt it did exist, but I do not see that these proofs prove it. All we know about the gloss-argument is that a ninth century commentator quotes others who do not always give the same explanation of the same passage and that he calls them 'old' and 'very ancient.'

Thence is drawn the conclusion that they existed three or four centuries earlier than he (500-600 A. D.), and, because their readings or explanation are different, therefore the original text must have been much earlier still, or, by the help of Bṛhaspati, 'several centuries' older, i. e. "it existed in the second century." But with Bṛhaspati whose date is only probable we stand still "about 600 A. D." and can only guess at the time preceding.

The proof above is given to make "inevitable" the same date deduced as "not unwarrantable" from the mere fact of our Saṁhitā's precedence of Nārada whose work *probably* belongs to about "the middle of the first thousand years of our era" (p. cvii).

The difficulty I find here is that, when we start from  $y$  to  $x$ , three parallel lines of equal length lying between the two do not bring us any nearer to  $x$  than one of them would. We have evidence enough that the Saṁhitā existed before the sixth century, we will say, but three proofs of this do not bring us to the second century. Is it not building a good deal out of Medhātithi's old commentators to assert the number of centuries they must have preceded him and then add a specified number of centuries for the still older text? To deduce a space of just seven centuries from such proof seems at least daring. The method of proof is, moreover, in this particular not new. Dr. Burnell used the same argument, and instead of the second arrived at the fifth century. His subjective decision as to what 'old' and 'very ancient' meant happened to differ from that of Prof. Bühler.\* But take away Medhātithi's 'ancients' and we have Bṛhaspati. Yes, but we are still at the same middle of the thousand years. So with each in turn. As to Bhāravi we find here a purely subjective decision bringing us the desired proof. Even were we sure that the Bhāravi citation does allude to our Saṁhitā (which is by no means certain), we only knew of this fact, that his fame, as Prof. Bühler says, was well established in 634 A. D., and therefore he "cannot possibly have lived later than in the beginning of the sixth century, but may be considerably older." The 'may be' cannot be attacked, but do we know that it takes more than a century to establish a poet's fame in India?

Prof. Bühler has done the best one could do with his materials. I question only whether the evidence can give us more than this, that our Saṁhitā antedates Nārada and Yājñavalkya.

For the earliest date we have 'very scant data;' the question is of course limited to some extent, very greatly according to Prof. Bühler, by the Yavana and Pahlava verse (x.43-44). "About the beginning of the second century or somewhat earlier" is Prof. Bühler's limit. The position of the Saṁhitā relative to the xii. and xiii. *parvans* of the Epic

\* In 1884 Dr. Burnell's *Manu* was published. Prof. Bühler did not allude to the fact that the same argument from Medhātithi was used by Dr. Burnell. Could he have written his Introduction before this? But in it he quotes works later than that of Dr. Burnell's. I do not know whether Burnell originated the argument in detail or not. That he used it, ought, it seems to me, to have been spoken of in this work, though it is one naturally presenting itself to one who sees the '*pūrve*,' etc.

teaches us 'nothing definite.' Not enough force, it seems to me, is given to the fact that the late books of the Epic say nothing of *dharmasūtra* and do mention the *dharmagāstra* (of Manu). The result is drawn, notwithstanding, that the authors knew only the *dharmasūtra* (p. xcvi). The later books of the Epic seem to me to be so very much later that I cannot help protesting against such remarks as "the existing text of our Smṛti" is "younger than the Epic." Does Prof. Bühler mean that the whole Mahābhārata was completed before our present text of Manu existed? In point of fact when the Epic is quoted as a time-guide it cannot be taken as a continuous whole, unless we are handling epochs of half-thousand-years. Even the Manu-text, it seems to me, ought to be spoken of always in portions, early or late; especially uncertain in total results is the stress laid on the interpretation of one verse. In an ordinary work we are not shy of interpolations. Is it not simply because we have so little proof besides that the idea of such a verse as that cited above being an interpolation is repugnant to us?

The whole subject appears to me unsettled. Our present Saṁhitā cannot be proved to have been in existence much before the middle of the first thousand years A. D.; on the other hand, it is probable that it did exist much earlier, and may have existed in some form or other in the time of the late Epic—the *gāstra* there quoted not being our present text, but, again, by no means as yet proved to have been no metrical *gāstra* at all. As no one knows the date of the present form of the Epic, or the xii.-xiii. parvan-appendix to the Epic, the time in terms of years is unknown. I see no reason yet for not believing that a metrical Manu-*gāstra* existed in some shape before the completion of the xii.-xiii. parvans of the Epic. In respect of greater precision, *non liquet* seems to me at present a more scientific result than any *q. e. d.*

The Synopsis calls forth hearty thanks from every student of the law. The great labor of comparing the parallel passages of the Epic has been done almost exhaustively, so much so that I hesitate to add the few below lest it should seem an indication of incompleteness in the Synopsis. Let me say at once, therefore, that those noted here are but a pin added to the cushion-full collected by Prof. Bühler. Moreover, many are given not (as the Synopsis was meant) to supply verses, but to refer to passages that may be of interest to those still at work on the text. I have sometimes noted verses (like Prof. Bühler's reference to ix.213-4-5) that are not really identical, so that marks of equality (=), 'like,' and 'cf.' are used to point out respectively identical words, equivalent verses, and general similarity. The likeness in pith is, historically, often more instructive than that in the outer form.

In the First Book of Manu: Note the set formula of the Epic in introducing religious and philosophical talk; thus, with Manu i.1, cf. Mbhā. xii.303.8, and xii.36.2-3, "of Manu;" with 5, cf. xii.166.11, and 182.6, "of Bhṛgu;" with 12-13, cf. xii.312.1-5 and observe the same order of verses; with 34-44, cf. xii.166.16-24; with 35, cf. i.65.10 ff.; with 52-57, cf. xii.313.1-7, and with 80, cf. ib. 10 and 2; with 78, cf. xii.302.14 ff., ib. 309.3; 85, like ib. 261.8. Manu i.99 (*anu* for *adhi*)=xii.72.6.

Book Two : With 2, cf. xii.167.11 ff., 29; 12, like xii.260.3; 59, cf. (differs) xiii.104.104; with 83, cf. xii.361.10, and xiii.7.14; 94=i.75.50 and ib. 85.12: 110(a)=xii.288.35(a), and (b) nearly like (b); 111=i.3.91, and xii.328.51(b) 52(a), (a) almost=51(b), b=52(a); 145 like xiii.105.14(b)15(a) but note only 'ten,' 159(b) like xii.288.18(a); 161, cf. *triṣṭubh* xiii.104.31; with 159,179, cf. xii.104.32,30; with 178-179, cf. xii.270.24-25.

Book Three : With 4,7,8, cf. xiii.104.123 and 131 ff.; 17(a)=xiii.47.9(a); 48 like xiii.87.10 ff.; 85, cf. xiii.92.3 ff.; 92,102,108,116,117,119 like and in part=xiii.97.15 ff., while 101(a)=v.36.34(a) and (b) nearly=(b); 130(a) except pl.=xiii.90.53(b); 131 like ib. 54; 150 ff. all like a parody of xiii.90 adhy.; 158(a) ('prisoner' should be 'poisoner' in translation; to *kunḍāci*, cf. Nil. here and at xiii.143.24)=v.35.46(a); 168=xiii.90.45 (except *grādhama*); with (153 and) 173, cf. xii.34.2 ff.; 258 like xiii.93.7,8; 273-274, add xiii.126.35-36; 278=xiii.87.19 (with 276-278, cf. ib. 18); 285 (and iv.5), cf. xiii.93.15.

Book Four : With 39 cf. loosely xii.193.8; with 52-53, cf. parts of xii. 193.24,17; with 56, cf. xii.193.3, and, in general, ib. 283.54; 71(a)=xii.193. 13(a); 76, add to citation from xii. that the rule xii.193.7 is in part ascribed to Nārada; 78 like xiii.104.58(a); 83(a) almost=xiii.104.67(b), and (b) very like ib. 70(a); 85 almost the same as xiii.125.9; with 88, cf. xii.322.29 ff.; 143 like xiii.104.58; with 189-190 cf. images at xii.36.40, and with 195 cf. loosely xiii.163.56 ff.; with 215, cf. xii.295.5,6.

Book Five : With 31, cf. xiii.115.53 'rule made by Manu'; with 55, cf. same derivation xiii.116.35; with 56 (*pravṛtti*), cf. xii.199.40 and xiii.115. 85.

Book Six : With 1 and 2, cf. similar xii.245.4; with 5, cf. for gods xiii. 104.41; with 6, cf. the like xii.304.20; with 5,12,14,54, cf. xiii.91.38 ff.; with 17,18 (and Manu iv.7), cf. similar xii.245.2,9; with 20, cf. ib. 12(b),13 (a) (and with ff., cf. ff.); with 33, cf. xii.246.4(b); with 41, cf. xii.279.3, and (b)=(b); 56(a)=xii.279.9(a); with 58, cf. ib. 11 (with 56,57, cf. also in general xii.287.14); with 60, cf. xii.246.19; with 63, cf. xii.304.44; 66 like in sense (*līṅgāni utpathabhūtāni*) xii.321.47; with 76, cf. xii.298.14; 90=xii.296.39 (except (b) *evam*); with 95-96, cf. xii.160.29.

Book Seven : 8(b)=xii.68.40(b); with 41, cf. xii.60.39 (Çūdraḥ Pāijavana); with 50, cf. ii.68.20; iii.13.7; xii.59.60; xiii.157.33; with 91, cf. xii. 96.3; with 178-9, cf. v.39.55; with 182, cf. xii.100.9 ff.; 191, add vi.19.4 and cf. the rule practised in ib. 43.102.

Book Eight : 44 like xii.132.21; with 85, cf. xiii.163.56; with 86, cf. xii. 322.55; with 351, proverb, cf. xii.34.19; ib. 56.30; ib. 15.55; iii.29.27; 377, for *kaṭāgni*, cf. xii.97.22; 416 like ii.71.1 (B. omits one before), repeated i.82.22 (*bhāryā dāsaḥ sutaḥ; yat te*, etc.), and v.33.64.

Book Nine : 14 like xiii.38.17; with 26, cf. v.38.11; with 85, cf. (expressly "from Manu's *cāstra*") xiii.47.35 (the ref. on vs. 87 is adhy. 47, not 46); 150-156 like loc. cit. (Synop. s. vs. 150), viz. xiii.47.11-16, and note 154(b)=ib. 21(b) with slight changes; with 160 ff., cf. loosely xiii. 49.12 ff.; with 295-298, cf. xii.321.154-155; 301 like xii.91.6; with 303, cf. xii.68.41 ff., and ib. 139.103 ff.

Book Ten : with 3, cf. i.11.16; (4, cf. xiii.47, not 46); with 8 ff., cf. xiii. 48.5 ff., and with 10,16,17,41,46, cf. xiii.49.5; with 63, cf. in general xii. 297.23-24; with 126-127, cf. xii.297.25-29.33-34.

Book Eleven : 56 like v.40.3, and (b) like xiii.22.29(b); with 83, cf. xii. 152.30; with 104-105, cf. xii.35.20; with 147, cf. xii.165.34; with 179, cf. *triṣṭubh* xii.165.29.

Book Twelve : with 12 and 14, cf. xii.219.40(b); 27 ff. like xii.248.20-25, and ib. 286.29-31; 78 like xiii.116.28-29; 81 like xii.206.4 (Manu i.28) and xv.34.18; with 82-84, cf. xiii.118.1 ff.

After the usual vote of thanks to the American Academy for the use of its assembly-room, the Society adjourned to meet again on Wednesday, October 26, 1887.